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SUGGESTIONS

FOR THE

IMPROVEMENT

OF OUR

TOWNS AND HOUSES.

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MANY YEARS A LIEUTENANT IN THE ARMY.

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PREFACE.

In offering the following Suggestions for the improvement of Towns and Houses to the candid attention of the British Public, I can safely say that my sole object is the good of my fellow-creatures, by consulting their happiness, and adding to their comfort and delight; and if I have given my opinions with too much freedom, I beg leave to plead my enthusiasm in so good a cause, and my deep concern at seeing the most ill-contrived and unsightly plans from time to time put in execution, with an utter disregard to the convenience and healthful enjoyment of all whose feelings should never be lost sight of.

Numerous small plots of open ground around every town are already marked out for building upon, and the plans of the streets already traced,

with the utmost ingenuity, so as to crowd as many little streets, and build as many little houses, without an inch of garden, as it is possible to huddle together; the streets so narrow and devoid of plan, as to render impracticable any system of sewerage or drainage. The Legislature would do well to pass a temporary enactment to prevent all these narrow lines of intended houses from being proceeded with, rather than, by suffering them to be thus built, inevitably incur increased trouble and expense in their after-cleansing and draining; at the same time to cause all the plans to be traced anew, with a little more judgment, and also enact some control over the covetousness of private parties.

The authorities of a town should be diligent in the prevention of such evils as too narrow streets and lanes. It would be far better to have fewer inhabitants, and those comfortable, than a numerous population, living crowded together, and up to their knees in filth. The endeavour should be, not to try how many pitiful, narrow, small streets can be crowded on a certain small space of ground, but how many streets can be well sewered and drained, and made of a good width and length, so as to be most handsome, most comfortable, airy and

healthy: the houses could then be easily enlarged at any future period, so as to render the streets still handsomer. Now this cannot be done if the streets are spoiled at first, by tracing them too narrow, too short, and crowding too many together on a small piece of ground.

A long straight street can be more easily drained than a crooked short street; and a wide street enjoys more sun, is lighter, more cheerful, more airy, easier of thoroughfare, and possesses greater capabilities of improvement and beautifying than a narrow street. One that is both straight, wide, and long, can scarcely fail of becoming handsome in the course of years, however humble its inhabitants may be originally, as some of the owners of the property therein will, from time to time, acquire wealth, and improve the houses they live in.

In every possible view of the subject, it would be wise to trace the plans of new streets, from the first, as wide, as long, and as straight as possible, adopting the reasonable measurements laid down in the following pages.

It used to be very generally remarked, a few years ago, that most new houses were run up in an incredibly short time, with walls, joists, and

rafters most dangerously thin and slight; the consequence was, as might have been expected, many accidents occurred from the falling in of walls and floors. I remember about twenty years ago, one or two whole rows of new houses were blown down by a gust of wind, as completely as an edifice raised by a child with a pack of cards. I am not sure that a building law has not been enacted since then, which put a stop to such gingerbread houses; but I still consider the style of building much too slight, both in walling and in timber; moreover, the builders are most unnecessarily stingy in space, half the rooms in the kingdom not being large enough to swing a cat in.

An opinion has been for some time past gaining ground with the reflecting portion of the public, that something must be done to better the condition of the labouring classes, who are becoming so exceedingly numerous by the increase of the population, that their numbers alone are embarrassing, at the same time that their reverence for superiors, and respect for the classes above them is evidently much weakened, and likely to be succeeded by vindictive feelings and hatred, springing from their miserable condition, and what little education they may have, not being

based on a religious foundation. Too true it is that the working classes of Great Britain are not happy; and whether in or out of employment, their homes are generally so uncomfortable and wretched, that they naturally become discontented, and make comparisons between their own miserable houses and the better dwellings and greater comforts of every class above them; thus when there is any riotous ebullition of passion in an accumulated mass of poor people, they seem to think of nothing else but burning and destroying or plundering other people's houses and property, either by way of retaliation and revenge for being better housed than themselves, or else to level all to the same depressed condition as their own.

A great step is, however, about to be made by Government, in the universal education of the people, on the principle *that there is a God*,—i. e., they are to have an education based on the Christian Religion; and never before, in the annals of England, has so great, so important, so blessed a measure been propounded for the sure good of the nation. May the Lord God of heaven vouchsafe his blessing on the work, yea, "Prosper thou the good work, O Lord God!"

And next to the support of true religion, and religious education, which is the only certain foundation of temporal and eternal happiness, it must always be the duty of a Christian Government to endeavour to improve the people and promote their happiness by other means—secondary ones, certainly, but not the less indispensable, besides religion and education; and one of the first and most effectual steps of this nature, would be to give the people *comfortable domestic homes*, by the improvement of their houses and streets, and a general system of annexing a garden to every house, at the same time encouraging our domestic commerce with our Colonies, and our domestic trade, rather than foreign commerce; planting new settlements every alternate year, and thus giving a stimulus to the home (and by this means, certainly more to be depended upon and more permanent) employment of our great population, by determined and open encouragement of emigration.

A garden to every house would gradually inure to out-door work, people whose callings for the most part confine them in-doors.

It is high time that a general reform in building were commenced throughout the kingdom, and,

with the improvement of towns, be made a *compulsory* measure; I say compulsory, because there are certain people and certain classes who are afraid of loss, and who make a point of opposing every change or alteration that does not, at first sight, appear to advance their own interests; but it may be asked—who has ever heard of any persons being injured by the improvements of the buildings or streets of a town? and even if there have been any old interests injured, yet these must sometimes be disregarded when a general good is to be obtained.

No doubt a compulsory law to compel builders to erect good houses and cottages would, at first, raise a host of opposition from petty capitalists and men who make a trade of building hovels scarcely fit for swine to dwell in; but if such a law could put a stop to the operations of the latter class of petty tyrants, it would be a great public benefit; there would then be no more miserable hovels run up by people who do not possess the means or the will to erect better buildings; and the working classes who now pay shamefully heavy rents, and who are the victims of the cupidity of such cruel landlords, would have good and comfortable houses for the same high rents which

they now pay for dwellings more calculated to produce disease than comfort.

Building has hitherto been a noted money-making speculation, instead of being pursued as a delightful pleasure and an act of benevolence, in affording happiness to our fellow-creatures; and the principal argument used by the opposers of a Buildings Regulation Act, is, that the poor cannot afford to pay sufficient rent or interest for the outlay of money on a good cottage, therefore they must be content to live in hovels. But as a man ought not to trade beyond his capital, so ought not a man to build without a sufficient capital to build properly, and a cottage ought not to be deemed properly built, that has not substantial brick or stone walls, a good roof, capacious rooms, a good cellar,* doors and windows of liberal dimensions, a passage from the outer door and a staircase, both separate from the rooms; a back-yard or small garden with a convenience therein; and the chambers of the dwelling of a good height

* A cellar would be a great comfort to every poor family. It is the custom in the northern counties to build the coal-house at a distance from the cottage, and the women have to fetch in their coals every day in the worst of weather; but this is nothing compared to the vexation from the frequent robberies of coals committed every winter by bad characters who are ever prowling about.

and fitted with cupboards, &c. Such are the outlines of a complete cottage, and where one family could not afford to pay the rent, it should be adapted for two families (and not more), but the regulation should not be departed from, or evaded by erecting a building in a slight manner.

Imperfections and faults in a building or a town, are frequently more apparent to a perfect stranger, and more quickly detected by him, than they are by an old inhabitant of the place; and, acting under this impression, I purposely visited many towns, and took considerable pains and time to mature some of the plans on the spot, hoping that my suggestions would be received in good part, and my example followed by persons still more capable of pointing out improvements desirable in towns.

Some of these plans I have now detailed, to show what might be done, by way of example to other towns, whose faults and inconveniences may have been heretofore overlooked by their inhabitants. My wish is to stimulate the principal inhabitants of every town in the kingdom, to take up the cause of improvement with ardour, and to institute a universal fashion of inspecting, surveying, and planning, and a universal setting to work

of masses of our unemployed masons, bricklayers, carpenters, painters, gardeners, delvers, and labourers.

There should be a special commission of some of the first architects, engineers, and scientific men of the day, to go through the kingdom and reconnoitre and inspect every city and town, and prepare plans for improvements and embellishments, to be executed as time, means, and opportunity might offer.

Now that we are at peace with every foreign State ; with an abundance of unemployed money, and nearly a nation of unemployed people at command, there could not be a more appropriate period for undertaking numerous great or national works.

Perhaps some explanation may be thought necessary to account for my undertaking to write a work on building, not being an architect. For the information then, of all interested readers, I beg to state, that although I am not an architect, I have had almost as much experience as many a person who is one professionally. From the early age of sixteen my most favourite studies and drawings at a school in France, were plans of houses and towns, fortifications and maps, and

the five orders of architecture; and this fondness for architecture accompanied me through life, and impelled me to attend all the new buildings and new streets that used to spring up like mushrooms around London when I was a youth. The exceedingly deep and strong foundations of the Bank of England, in Bartholomew-lane, first gave me a notion of strength in building. My father (who was a partner in the firm of Bingley, Pitt, and Maslen) wished to bind me to an architect; but I longed to go abroad, and at length obtained an appointment for India, and in that fairyland of castles and palaces, I allowed no opportunity to escape me of seeing a great variety of buildings constructed, diligently attending their daily progress, in whatever part of India I happened to be. I saw some of the stupendous bomb-proof magazines and stores erected in Fort St. George; stone barracks at two or three other places; immense bridges at Beypour and Seringapatam; besides innumerable smaller buildings.* It will scarcely be said that I have not gained some experience in the subject I presume to treat of. And if the reader will excuse the literary faults of

* I was also an industrious draughtsman; I gave away in India one hundred and fifty of my own drawings. Excuse my egotism.

the book, as not being the production of a professed writer, the object I have in view may be thought of sufficient importance to serve as an apology for its publication.

THE AUTHOR.

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SYNOPSIS OF CONTENTS.

SUGGESTIONS

FOR THE

IMPROVEMENT OF TOWNS.

LONDON.

It is with the greatest diffidence that I venture to question the eligibility of the plans of an eminent architect,* for improving the banks of the Thames in the metropolis. He proposes to raise an embankment within the water-way, and thus, by narrowing the course of the stream, cause a higher rise of the water, and consequently an increased depth for the navigation of the river.

I have seen a good many broad rivers and flooded lands in India, and, taking a lesson from what I have seen, I much fear that the consequences of the proposed plan would be, to cause the country to be overflowed higher up the stream during any unusually wet weather, and the cellars of the houses to be inundated along the embankments; for if the stream be pent up in a narrower course, and impeded in its current, it will find itself a vent by spreading out its waters over the country: and this is not the only objection against

* Mr. Walker.

the plan; it is not a mere embankment that is wanted along the Thames throughout the city, but a quay-street, a handsome street, open along the water-side.

So far from making the Thames narrower in London, it should be made as wide as possible, and shallow also (above the bridges); for we do not want ships to come up past London-bridge: if they did they would at once destroy the beauty of the stream, which mainly consists in its width, while its comparative safety is insured by the absence of great depth. If the water was made very deep at the sides of the river, as the foregoing plan proposes, the accidents from drowning would be multiplied tenfold every year. I have bathed, in my younger days, from off the coal-barges that lie opposite the Strand, and can recollect I walked some distance towards the middle of the river at low water, and I attribute the rarity of accidents from drowning, solely to the circumstance of the shoalness of its bottom.

The river is deep enough above the bridges for small steamers, barges, and pleasure-yachts, and these small craft are the only vessels that will not obstruct the view of the water-landscape. I am far from considering even the muddy bottom of the river, when the tide is out, as an ugly sight: it affords entertaining variety to the every-day scene, quite as much as the ebb and flow of the tide on the sea-shore: were the river at all times at one height, and one depth, and the bottom never to be seen, it would be for ever a monotonous water-view, and tiring to look at. If ever the width of the river should be contracted in London, great

and violent floods could not spread out as they do now, over its present broad bosom; but they would bear down with such tremendous power that they would shake some of the bridges to their very foundations, and perhaps cause a waterfall under some one of them again, similar to what used to prevail under old London-bridge.

I venture to recommend that the river be made as wide as possible; and that every projection and excrescence that juts out into the water (especially the water-face of Somerset House), be cut off to make the line of the shore as direct as possible, from angle to angle, and from bend to bend of the river, all through the cities of Westminster and London, to the nearest angle of the Isle of Dogs.*

* I beg to insert the following quotation from Knight's "London," Vol. I., as the plans detailed are so very similar to those I recommend: nevertheless I had compiled the whole of this book before I saw the above work, so that it cannot be said I borrowed my ideas from it:—

"After the great fire of London, Sir Christopher Wren designed a plan or model of a new city, in which the deformity and inconveniences of the old town were remedied, by the enlarging the streets and lanes, carrying them as nearly parallel to one another as might be; avoiding, if compatible with greater conveniences, all acute angles; by seating all the parochial churches conspicuous and insular; by forming the most public places into large piazzas; by uniting the halls of the twelve chief companies into one regular quadrangle, near to Guildhall; by making a quay along the whole bank of the river, from the West-end to the Tower. The streets to be of three magnitudes; the three principal leading straight through the City, and one or two cross streets, to be at least ninety feet wide; others sixty feet; and lanes about thirty feet, excluding all narrow dark alleys without thoroughfares, and courts.

"The practicability of this plan, without loss to any man, or in-

The good citizens of London may go on altering and improving the metropolis, century after century, but they will never give it the finishing stroke of perfection, until they can boast of a quay-street or river-parade; a boulevard; and a Palais Royal.

It is proceeding on the worst system in the

fringement of any property, was at that time demonstrated, and all material objections fully weighed and answered. The only, and as it happened insurmountable difficulty remaining, was the obstinate averseness of great part of the citizens to alter their old properties, and to recede from building their houses again on the old ground and foundations; as also the distrust in many, and unwillingness to give up their properties, though only for a little time, into the hands of public trustees or commissioners, till they might be dispensed to them again, with more advantage to themselves than otherwise was possible to be effected. Thus the opportunity in a great degree was lost, of making the new city the most magnificent, as well as commodious for health and trade, of any upon earth.

"Wren's plan would undoubtedly have secured to us, both of the two great objects which should be sought in all our metropolitan improvements, namely, complete and universally uninterrupted communication between all parts, and increase of architectural beauty. But is it not too often forgotten, whilst the failure of that plan is being regretted, that *it may yet be carried into effect* in all its essential features? As, for instance, two or three great lines of communication from one end of London to the other; streets broad in proportion to their use, and the narrowest not too narrow for health and convenience; a quay along the whole bank of the river; and insulation of all public structures worthy of such distinction;—these are the chief features of the great architect's proposals. What is to prevent us from realising all these now? Considerable progress has been made, or is making, already, with regard to the first two points; we hope yet to inhale the fresh breezes by the side of our fine river; and with regard to the better display of our public edifices, we are willing to look upon the improvements made around the Monument as the commencement of a good work, of which the opening of the area around the same architect's greatest work, St. Paul's, shall be the next and more important fruit."

world to permit the banks of rivers, *within towns*, to be encroached upon by building houses, warehouses, cranes, or edifices for any other purposes whatsoever, as these structures would be, under all circumstances, more appropriately located around docks and basins. The banks of rivers, within towns, should always be left open for the public, not only for the pleasure of water-scenery, but for the sake of health and a promenade in an open current of air, which is generally more grateful and refreshing, coming off the water, than on any open spaces of land of equal extent. Besides, there is also frequently so much difficulty in procuring water to extinguish extensive conflagrations, and so much time lost when the water-pipes fail, and that element has to be fetched from so great a distance, in consequence of the banks of the river being closely hedged in by houses and other buildings, that common sense and the soundest wisdom would dictate, that all buildings, of every nature, standing on the banks of a river, especially in such great towns as London and Hamburgh, should be pulled down and cleared away, and the sides of the river be formed into wide streets as the banks of the Seine are at Paris; and if such streets were colonnaded with piazzas and round iron pillars, after the fashion of the Quadrant in Regent-street, the view of them would be truly splendid.

London is so crowded with houses, and so densely populated, that it wants a River-parade more than any other city that I am acquainted with. If it be objected that London is peculiarly a commercial and trading city, and that to remove the wharfs and warehouses from the banks of the

river, within the city, would be to cause the destruction of a great mass of property, I beg to qualify the objection by showing that a great deal of this supposed loss is both imaginary and temporary; for, let it be recollected, that "Rome was not built in a day," nor would all the warehouses on the banks of the river be destroyed at one and the same time: many of the buildings are very old and ready to crumble into ruin, and to keep them in continual repair costs a deal of money, and to pull them down and rebuild them would cost a deal more; the plan, therefore, should be, to prevent them from being repaired, and to purchase the leases and buy up the ground and ground-rents all along the river-side, as fast as the owners can provide themselves with new sites on the river outside London: and if the owners cannot find new situations outside the metropolis, whereon to erect new wharfs and warehouses, they might club together and hire the East India Docks,* a place so capacious, that twice the number of warehouses might be erected there that now occupy the river-banks within the city: or if the East India Docks are too far off from London to be quite convenient, a large basin might be dug in the Borough of Southwark, and warehouses be erected all round it, for the reception of such articles as are now brought to the City-wharfs, such as sugar, iron, stone, &c. &c.; and this new basin might be christened the City-Warehouse Basin, (by way of distinction, although not in the City,) and be within a quarter of a mile of the

* The East India Docks are now completely deserted.

south end of the Southwark iron-bridge, which leads to Queen-street.

This basin or inlet might be dug and formed near the Queen's (Bench) Prison, or somewhere in that direction; the ground on that side of the river being lower than on the city side, is well adapted for a basin or inlet, with wharfs, jetties, and piers to unload barges at. The inlet or basin should not have dock-gates or sluice-gates to be continually at the trouble of opening and shutting for the ingress and egress of vessels, but it should be dug as deep as the river, be open to the river, and the water within to rise and fall with the tide in the river, just as if it were a small harbour or branch of the river, thus affording all the same facilities for barges and lighters as the shoal bottom and shelving shores of the river on the city side.

The clearance of the buildings from the banks of the river in Westminster and in the City being effected, wide streets should be formed along the river side from Westminster Bridge to the Tower, and from the Tower to the Isle of Dogs; consisting of handsome lofty houses facing the water, at the distance of one hundred and fifty feet, and a river-parade paved and planted, along the water's edge, fenced with a low balustraded-wall.

The river streets should be on the same level as the present Temple gardens, and pass *under* arches at the ends of the different bridges, (in the same way as Thames-street passes under the arch of London-bridge,) because the bridges are of so preposterous a height, that people cannot enjoy the sight of the water from them; and if the streets

were to be raised to that height, it would utterly ruin the effect and the pleasures intended.

These new Thames streets or river-parades, would be the grandest and most healthful alterations and improvements that were ever effected in London.

Secondly, A Boulevard or circumferential street round London is a great desideratum; but the plan of it is so connected with the parks, that we will offer a few suggestions respecting the latter.

Victoria Park, at the north-east end of London, is already planned, and it is understood that Finsbury Park and Lambeth Park are also decided upon; but there should be two or three more small parks made besides the above three, if it were for nothing else but to prevent the increase of the metropolis, otherwise millions of houses will be built, and so enlarge the suburbs, joining them to the City, that London will be like a kingdom of itself in a few hundred years more, so overgrown and unwieldy will it become.

The other sites which should have parks to stop the spreading pestilence of house-building and house-crowding, are, 1st, one at Pentonville; 2nd, one at Hoxton; 3rd, one between Stepney and Bromley; 4th, one at Walworth; 5th, one at Rotherhithe; and 6th, one at Deptford; making, with the three of Finsbury, Lambeth, and Victoria Park, a total of nine new parks, entirely encircling the metropolis. This would be better than two or three large parks, as these small parks would divide the pleasure and recreation of such places more equally and more beneficially to the widespread population of the metropolis; and the

scenery afforded by them would render the approaches to London from various quarters extremely beautiful.

There is another consideration regarding the forming of many parks, which must not be lost sight of, and that is, where are the numerous regiments of London volunteers, amounting to two hundred thousand men, to be drilled and manœuvred, in any future war with France, if we permit every open space, every field, every corner and cranny of the metropolis to be built upon for miles round.

To revert to the Boulevards: the North Boulevard should be a connecting avenue from one park to another, consisting of a broad raised road planted with several rows of trees on both sides, and forming splendid malls or drives, encompassing the northern portion of the metropolis; beginning at the Green Park, and from thence passing Kensington Gardens to the north-west angle of Hyde Park, thence to the Regent's Park, and from the latter in a straight line to Victoria Park, embracing in its course Pentonville Park, Finsbury Park, and Hoxton Park; and from Victoria Park to Stepney Park, and thence down to the new Quay-street at the Isle of Dogs (or proposed new Fort-Waterloo).

The South Boulevard in like manner forming an avenue and mall, or drive, from South Lambeth Park to Walworth Park, thence to Rotherhithe Park, thence to Deptford Park, and thence to Greenwich Park.

The next desideratum for London that we shall advocate, is the building of a *Palais Royal;* and

unless this fairy-land residence of the enchantress "Pleasure" be conceded, London will never be anything else but a second-rate city.

Whatever may be the beauty of the shops under the piazzas within the new Royal Exchange, there will always be wanting the grass plots, the rows of trees, the fountain, the marble statues, and the glass saloon. The quadrangle of the Royal Exchange can never have these beauties; it must always be a barren, paved, naked area; and its extent is also too small.

The most appropriate and most central situation for a *Palais Royal*, seems to be somewhere between Covent Garden Market, and Leicester Square; this being within a short distance of the West end of the town, and not a great way from the principal theatres. Several blocks of old dull houses in dismal streets should be cleared away in this locality, and a spacious open piece of ground prepared, of exactly the same extent as that occupied by the Palais Royal at Paris; and we would recommend that, whether this concern be accomplished by a single capitalist or a corporate society, the whole exact plan and dimensions of the Palais Royal at Paris be followed without the least deviation in anything.

It may be useful to describe to those of our readers who have not visited Paris, the principal features of the Palais Royal. They must imagine a large oblong field of green grass, surrounded by two or three rows of small pretty trees, a fountain in the centre shaded by trees, and at one end is a refreshment room made entirely of glass windows, which gives it the appearance of an aviary or

cage, so that the company within can see entirely around the outside of the room. This field is ornamented with a few statues in white marble of the most exquisite beauty. The whole field is surrounded by a continuous pile of building, two or three stories high, which was formerly a palace, the ground floor of which forms a deep and broad piazza or colonnade or cloister, open to the field, but fitted up in the back part with a row of shops of the most elegant and costly articles, and of unrivalled beauty of appearance. The building is of stone, and at one end is a separate quadrangle. The Palais Royal covers a space of ground about one thousand feet long by four hundred feet wide, and as may be supposed is a favourite rendezvous of both natives and foreigners, more particularly in wet or cold damp weather, when perambulating the streets is not very agreeable. The arcades of the different quarters of Paris are very beautiful places, but they do not possess the variety of scene nor length of promenade which the Palais Royal does, as the sheltered walk and shops extend entirely round the inside of the latter.

It might be supposed that such a place as the Palais Royal would engross a great proportion of customers from the street-shops, and seriously injure the latter; but I have reason to believe that such is not the case, as the occupiers of shops in the streets of Paris, as in London, have all their established connections, who are constant customers, and who are necessarily the support of the shops, and that the splendour of the Palais Royal shops is in no way injurious to the others; for if there were no Palais Royal, there would not

be half so many strangers visiting Paris, and therefore the existence of such a place of attraction is actually a benefit instead of an injury to that city.

The next improvement we recommend in London is that of a series of roofed streets and passages, commonly called *arcades*, for foot-passengers, but we recommend them in London for a very different purpose to that for which they were invented at Paris.

The one principal thoroughfare or great artery for the circulation of human beings from the East end of London to the West, and from West to East, —namely, Leadenhall-street, Cornhill, Poultry, Cheapside, St. Paul's, Ludgate Hill, Fleet-street, and the Strand, is so crowded, confused, swarmed, clogged, hindered, obstructed, and jostled, with the millions of living beings that are continually passing to and fro along this one principal thoroughfare, that if the population goes on increasing as it has done the last ten years, it will become a question of serious import, how these crowds are to make their way along this only line of transit, and whether another great artery, another great thoroughfare, must not be created through all the back streets which run in a direction parallel to Cheapside, the Strand, &c.? But the back streets, both to the south and north of the line of Cheapside and the Strand, are all so narrow, that it would cost as much, perhaps, to widen them as it would to build an entire line of new streets.

The plan, then, that we beg to suggest, is, to leave the one principal thoroughfare for carriages,

and to construct a continuous series of arcades, for foot-passengers only, to draw off a portion of the yet unborn millions who will otherwise swarm and block up the foot-pavements of Cheapside and the Strand. The arcades to be built in the following line, and to consist of twelve or more separate structures:—No. 1 arcade, from the east end of Piccadilly or the Quadrant to Leicester-square.—No. 2 arcade, from Leicester-square to Covent Garden Theatre.—No. 3 arcade, from Covent Garden Theatre to Lincoln's Inn-square.—No. 4 arcade, from Lincoln's Inn-square to Farringdon Market.—No. 5 arcade, from Farringdon-street to St. Paul's Churchyard. Paternoster-row to be pulled down, cleared away, and a splendid fountain to occupy the site.—No. 6 arcade, from the back of the new General Post-office, St. Martin's-le-Grand, to Guildhall.—No. 7 arcade, from Guildhall to the Bank of England.—No. 8 arcade, from the new Royal Exchange to Bishopsgate-street Within.—No. 9 arcade, from Bishopsgate-street Within to Houndsditch. The foregoing arcades to be carried in a continuous series, as far as is practicable and according to the circumstances of the lanes and alleys, and blocks of houses that may have to be cut through for their erection.—No. 10, a branch arcade, to lead down from the general line to the Temple gardens (Fleet-street), the said gardens to be much enlarged and lengthened along the side of the new Quay-street, previously recommended.—No. 11, a branch arcade, from the general line to Trafalgar-square.—No. 12, a branch arcade, from the general line to Somerset House (Strand).—No. 13, a

branch arcade, from the general line to the front of the East India House (Leadenhall-street).—No. 14, a branch arcade, from the general line, near Houndsditch, to run parallel with Houndsditch and the Minories, through those lanes known by the names of St. James' place and street, Duke-street, then crossing Aldgate-street, lead down to Tower-hill, through Little George-street, Vine-street, New-square, America-square, the Crescent, and the Circus (Minories).

The foregoing arcades should be built on the same plan as those beautiful places at Paris called the *Passage de Choiseul, Passage du Saumon, Gallerie de Vivienne, Gallerie de la Bourse*, &c.; and if they were as brilliantly lighted at night as the latter, would attract much company to London, and increase the retail trade of the metropolis.

The London arcades, according to the foregoing series, should terminate in Houndsditch with a splendid quadrant (exactly similar to the quadrant at Regent-street), which should sweep round into Bishopsgate-street Without, or else into Shoreditch-street, which contains one of the great entrances into London, viz. the Eastern Counties Railway station, as Whitechapel is the Eastern entrance for coaches, &c.

The great Eastern entrance into London, and the Southern entrance from the Dover and Portsmouth road, should both have a magnificent triumphal arch erected on the spot where the boulevard or mall intersects the said roads. By building some capital houses, and embellishing these inferior suburbs of London, the poorer classes of the population would become improved, more

intermixed with the wealthy, better provided for, and possibly raised in some degree from their present degraded condition. The arcades of Paris are of modern invention, and are distributed over most of the quarters of the city. These elegant passages, at first intended as substitutes for filthy bye-lanes and alleys, are become an agreeable lounge to the inhabitants,—an amusement to the curious; the shortest cut to the man of business, and a shelter and pleasant promenade in bad weather. The largest and most beautiful are No. 1, Passage du Saumon; 2, Vero Dodat; 3, des Panoramas; 4, Vivienne; 5, Colbert; 6, Choiseul; 7, Delorme; 8, du Cendrier; 9, de la Bourse; 10, de l'Ancient ou Grand Cerf; also a host of inferior arcades not necessary to enumerate.

Our Burlington arcade and Lowther arcade, are, to my way of thinking, very inferior passages to the best in Paris; but it is to be hoped that London will, before long, boast of as splendid arcades as those of the French metropolis. There is neither a want of money, nor a want of public spirit in the noble and illustrious inhabitants of London. Every select Square in London ought to be ornamented with a fountain and a few beautiful marble statues; and there should be Braminee tanks or reservoirs dug and constructed on the summits of Highgate-hill, Hampstead-hill, and Homerton-hill, with waterworks attached to each tank for the supply of the fountains; and each tank should consist of eighteen acres of water, eighteen feet above the surface of the hill summit, and eighteen feet below the surface of the

summit; and there should be a stone wall down to the bottom of the tank.

Of all the horrid abominations with which London has been cursed, there is not one that can come up to that disgusting place, West Smithfield Market, for cruelty, filth, effluvia, pestilence, impiety, horrid language, danger, disgusting and shuddering sights, and every obnoxious item that can be imagined; and this abomination is suffered to continue year after year, from generation to generation, in the very heart of the most Christian and most polished city in the world:—Shame upon those with whom the fault lies! If the market charter is of so sacred a character that an Act of Parliament cannot abrogate it, the authorities ought at least to forbid the admission of horned cattle.

Next to the abomination of Smithfield Market, is that of suffering rows of butchers' shops in the public streets of the metropolis, the most remarkable of which is in Whitechapel, where you may see, for the whole length of one side of the street, the gory sight of hundreds of beings hanging with their heads downwards, and their throats cut; scores of noble heads staring with their sightless glazed eyes, and long rows of headless trunks, inundating the foot pavement with rivers of blood, at which I have seen the living animals stop to smell and give an awful shudder, as if the crimson gore possessed a tongue that revealed to their instinct a murderous secret.

These are sights too repulsive to be exhibited in public streets, let alone the question of accidents and frequent danger to female passengers from

overdriven cattle, and an occasional mad ox. Such places ought to be hidden up, in some enclosed ground, or quadrangle of buildings; and for this purpose there should be twelve *abattoirs*, or shambles erected outside the metropolis at regular distances from each other, and at about one or two miles from any meat market in London, which meat markets should be screened from public exhibition by being enclosed all round, as well as erected in the retired lanes and alleys of the various wards and parishes.

Holborn and Whitechapel streets being both very wide thoroughfares, the appearance of these places might be wonderfully improved by building a colonnaded piazza to the houses on both sides the streets, so as to occupy the wide foot-pavement, and having sky-lights overhead, afford a sheltered path for foot-passengers; and if the houses were stuccoed in the eastern fashion, these two streets would offer a novelty that none of the others could, owing to their narrowness. We ought never to overlook or neglect any capabilities which afford a chance of diversifying and improving the metropolis.

There are many more improvements which are highly desirable, and we beg to suggest them for the sake of giving employment to the labouring poor as well as circulation to the money of the capitalist.

A handsome wide colonnaded street should be carried from Waterloo-bridge to Bloomsbury, intersecting Holborn, and that thoroughfare should be so continued on to Paddington.

A colonnaded street should be carried from Picket-

street (St. Clement's Church, Strand,) to Lincoln's Inn Fields, and thence continued to Holborn.

Temple Bar should be thoroughly repaired and ornamented, and a road should be made quite round it by clearing away the nearest houses and forming the opening into a circus. If it be necessary to shut the gates on state occasions, and civic festivities, the opening on each side the bar might be closed, and filled up with a temporary wooden structure or gallery, in the shape of a castle, with seats within for two thousand spectators, the receipts of which would cover the expenses of the accommodations, and also much gratify the public. The gates should be repaired and painted to imitate brass.

Holywell-street and Wych-street should both be pulled down, together with Lyon's Inn, Clement's Inn, and New Inn, and the whole of this capacious space of ground should be surrounded by private lodging-houses at. low rents, and the ground in the middle be laid out into a retired garden and quiet retreat from the noise of the Strand; and be called Royal Square, for the working classes.

A handsome broad colonnaded street should be carried from Holborn-bridge (Farringdon-street) straight to Islington, and thence to Pentonville Park.

Shoreditch and Norton Falgate should be widened and colonnaded till it meets the proposed Houndsditch Quadrant; and here it may be as well to remark, that, on whichever side the sun shines the most oppressively in any street intended to be colonnaded, it may, perhaps, be more benefi-

cial to confine the piazza to that side, and not erect a piazza on the already shaded side.

Several one-sided small streets should be erected in various parts of the City, at pretty regular distances from each other, and continued in a series from the East end of the town to the West end, to consist wholly of stables and stalls for gigs and carriages, which would enable people who reside out of town to put up their horses, &c., close in the vicinity of their counting houses and shops.

King-street and Queen-street, in the City, both require widening all the way from the iron bridge up to Guildhall. It has been recommended to build a new front to Guildhall. We cannot acquiesce in the recommendation; it would be a pity to destroy the present venerable looking gothic front. It is not a new front that is wanted, but a more extended front; but the front cannot be extended, unless the buildings on each side (forming salient wings) be pulled down; and as the Hall looks pinched up in a narrow nook, it would be a grand improvement to make the front three times its present width, in the same gothic style of building, and to widen King-street proportionally thereto. Nothing can exceed the crowding of spectators in King-street on Lord Mayor's day, and the ruffianly behaviour of the mob to respectably dressed people; and it is entirely owing to the narrowness of the street, which being as it were the fountain-head of the civic spectacle, attracts to this quarter a greater throng than any other place during that memorable day.

It is a remarkable fact that the City within the

walls cannot boast of a single garden, and this leads us to the consideration of the privation suffered by the annual king of the city—the Lord Mayor, who has a palace indeed, but not a single rood of ground for the exercise of the right honourable legs. Every palace ought to have a garden adjoining it, and the chief magistrate of the City is as deserving of such an ornamental, pleasant and healthful adjunct as any body in the world. We should recommend that all *that* block of houses in the rear of the Mansion House, enclosed between Cannon Street, Walbrook, and St. Swithin's Lane, be pulled down, and the whole space be planted with shrubbery and grass, and enclosed by a railing of musket-barrels on a low wall, painted green.

It is to be hoped that the new Royal Exchange will not be surmounted with a church steeple for its clock and chimes as the old Exchange was. A church steeple to a commercial building is perfectly ridiculous.

The Fleet Prison should be pulled down, and Farringdon-street should have two rows of trees (olives) planted along the edge of both foot-pavements. Considering the little thoroughfare there is in Farringdon-street, and its capacious width, a few rows of trees would help to fill up the vacant prospect; this street also, from its low situation and vicinity to a principal drain, would be the most convenient in London for fixing a row of circular boxes, eight feet high at intervals between the trees, painted white, roofed, leaded inside, and fitted with dish tiles in the same manner as the urinal-pillars on the Boulevards at Paris.

The reader must excuse our entering upon a subject, and we do it very reluctantly, that has a tinge of indelicacy in it; but if no one will dare to broach it for fear of wounding the delicate feelings of their readers, it is likely that this and similar nuisances will be continued without abatement.

A cruel custom obtains in every town in the kingdom, of putting up written notices on the walls of buildings, archways, gateways, and corners of courts and alleys, containing the following threat, *Commit no nuisance, or you will be prosecuted with the utmost rigour of the law.*

We say at once and without fear of false prophesying, that this inhuman custom must be put an end to, and there must be proper corners furnished for the wants of men, or the consequences at some time or other, when the population has become doubled and trebled, will be dreadful. The indelicacy of men watering against the walls of houses in public thoroughfares is not only very distressing to such of them as possess any feeling of modesty, but is productive of pain and confusion to all well-bred females who throng the streets and cannot avoid such rencontres in every direction. Sometimes there may be seen a rank of men, say, eight or ten gentlemen and labourers all in a row, "pumping ship" against boards and palings which surround buildings under repair, and frequently in such conspicuous situations and in public thoroughfares that really it is almost impossible for wives and daughters to go past the place.

Unfortunately, in consequence of the increase

of population in every town the nuisance very much increases, and so also do the warning-boards and *threatening notices:* and I know from painful experience that a stranger in a town of which he is not well acquainted, may walk all about it hunting for a secluded corner until his bladder is ready to burst, and perhaps after all his fatigue and suffering, is compelled to do the job under a gateway that risks him the punishment of a prosecution, not having discovered the board "commit no nuisance, &c."

As the constitutions of men and their business out of doors require for them means and appurtenances that are not requisite for the female part of society, and as it is a crying evil and an evil that daily gains ground in every town, i. e. that of blocking up every corner with iron spikes or boards of warnings, it will soon be an absolute necessity and one that will force itself on the notice of the public, from the danger that people run who are obliged to withstand the calls of nature be they ever so pressing (as we have heard that some individuals have been known to have their bladder burst,) some generous and liberal measures must be taken by the towns' authorities, to build and provide proper corners in the streets and at certain distances from each other, and have such places fitted with dish-tiles and roofed over; and the boards of notices and warnings painted on gateways should be ordered to be abolished.

Every street should be provided with one *pissaub khanah** consisting of six partitions, each partition enclosing a space like a watch box, three feet

* Hindoostanee for *watering place.*

square, seven or eight feet high, boarded in front all but a small space for entrance, dish-tiled, and roofed over sufficiently to protect people from being drenched with the droppings from the eves in wet weather. Until this is done both nuisances will increase with the growing population, until the streets become perfectly intolerable and impassable for females.

All that row of houses between King-street and Parliament-street, Westminster, should be pulled down and abolished, and the whole space made into one wide thoroughfare.

Pall Mall should be carried straight forward to the Green Park by the removal of the intervening buildings, or widening of the present narrow thoroughfare.

A triumphal marble arch should be erected at Spring Gardens, to form a public entrance and gateway into St. James's Park exactly facing the Strand; and there ought to be no public thoroughfare through the Horse-Guards.

The south side of Cheapside and the Poultry ought to be pulled down and rebuilt further back by at least fifty feet. Considering that Cheapside is one of the most crowded and thronged streets, with carriages, in the metropolis, immediate steps should be taken for the commencement and execution of this alteration, and the whole might be effected within fifty years without injury to any present living interest.

The north side of Cornhill and Leadenhall-street should be thrown back twenty feet.

A circus (like the Oxford-street Regent Circus) should be formed at the intersection of Cornhill

and Leadenhall-street with Gracechurch-street and Bishopsgate-street, by pulling down the corner houses; and an obelisk with posts should be set up in the centre, for the protection of passers, and lamps for the convenience of wheeled vehicles at night. There is scarcely a spot in London where there are so many stoppages of carriages or so many carriages passing across each other's route, as here; nor will the police suffer a gentleman's carriage to stop a moment even close to the foot-pavement for a friend to speak to those within the carriage, an act of overstretched tyranny, that I have witnessed, and personally experienced. Both Gracechurch-street and Bishopsgate-street should be widened, or the confusion among the waggons and carts will become worse than ever.

The south side of Aldgate and the east end of Leadenhall-street, should be thrown back in a line with the East India House. This improvement, which becomes more necessary every year, might be gradually effected without injury to any living interest, by spreading it over a time equal in years to one generation, say thirty years: but the law to authorize it, should be passed immediately, and thus serve as a preparatory measure for the inhabitants.

Great Tower-street and Little Eastcheap should be widened throughout and carried in a *straight line* to the junction of Gracechurch-street with King William-street. Nothing is more obvious to a stranger than the utility of this improvement, for the traffic from London-bridge to Tower Hill is immense, and there are few streets that can boast of greater confusion among waggons and

carts, and locked wheels, than Great Tower-street.

Very extensive improvements are visibly wanted all round the Tower of London; and it is ever to be regretted that the localities of that ancient castle should have been suffered to be encroached upon by the digging of the St. Catherine Docks and the building of those warehouses. Those overgrown dull-looking ugly buildings are not only dangerous to the City in case of their catching fire (which they probably will some day or other,) but they have completely spoiled the esplanade or what ought to be the esplanade of that revered old Tower: and we should be very glad to see those warehouses removed and the Catherine Docks filled up and planted with shrubbery. When the old streets of St. Catherine's were demolished for the purpose of making this basin, the ground should have been left open and appropriated to ornamental pleasure-grounds: the Docks and warehouses are too near the city, and the city may awfully find it out some of these days.

In the first place, the neighbourhood of the new Mint is greatly in want of improvement and beautifying: the whole of Upper East Smithfield and Ratcliff Highway should be pulled down, and an entire new street, three times its present width, should be carried all the way to Poplar-street and East India Docks; thus affording plenty of room for the increasing traffic to and from all the docks, basins, streets, quays, wharfs, stairs, and turns of the river. The houses should be roomy and the rooms capacious and airy, and well adapted for lodging-houses for sea-faring people, masters and

mates of small vessels, &c.; they should also have back-courts where they might dry their linen.

A new wide street should then be built from the East India Docks to the proposed Stepney Park.

All those dirty, narrow, and uncomfortable streets and blocks of houses between the Mint and the end of the Minories should be pulled down and cleared away, and a handsome half-crescent should be carried in a sweep from the Royal Mint to the south-east end of the Minories; a street at right angles with the Mint and crescent should separate these two piles of buildings and communicate with Rosemary-lane: the charity school at the corner of the Mint should occupy the first house in the crescent next the Mint, and it should be an ornamented building.

All those rows of houses, narrow streets and courts to the south and south-west of the end of the Minories on Tower-hill should be pulled down and cleared away, and a half crescent should be carried from the south-west end of the Minories to the Trinity House, forming with the other half crescent one magnificent sweep of good commodious houses, pretty lofty, and possessing noble capacious rooms, the lower stories consisting of such shops as are most generally required for such a maritime neighbourhood; one or two good hotels and two or three good public houses being included in part of the range. The Trinity House should be turned round and made to face the Tower, the same as the Mint does, and it should have a new front, similar to the latter building, and thus both would be uniform and ornamental wings to the whole crescent. The shrubbery of

Trinity House-square should then be extended all over Little Tower-hill, with two or three carriage-ways through it like a small park. A kind of sloping terrace-crescent might also be carried from Savage Gardens to the east end of Great Tower-street, and thus finish the whole circuit of the Tower esplanade. With these improvements and a new grand street to London-bridge in place of Little Eastcheap and Great Tower-street, the environs of the Tower of London would be no unenviable place of residents for the water-side and sea-faring inhabitants of London.

THE TOWER.

In the next place, a complete remodelling of that ancient castle the Tower of London should be effected, and as it is itself the greatest curiosity in the metropolis, it should be made so as to give it the perfect semblance of a castle a thousand years ago. The ramparts should have the besom of regeneration pretty liberally applied to them, and every brick building and every modern building with which they are encumbered and defaced should be swept away ; in fact, every brick building in the Tower should be entirely removed : the modern-looking brick ramparts should be cased outside with rustic white stone made to look as venerable with age as the White Tower, and they should be surmounted with battlemented or castellated parapets of white stone ; with here and there a small square overhanging turret, projecting out about two feet over the moat. The bastions should be rounded and circular, and also battlemented for very small brass cannon, and have

sham loopholes as if for matchlocks and arrows. Within the ramparts a long, low, white stone castle with round towers, should be seen just to rise about six feet above the ramparts, battlemented, sham loopholed, and flat roofed: this building would be but little raised above the ground within the Tower and only have a ground floor, and would therefore serve for the new small armoury, which ought not to be a building with an upper story, lest a second great fire should occur; and there should be no timber or wood used in the building. Such a thing as a church-steeple should not be seen in this ancient castle, but if there must be a place of worship, it should be so low as not to be seen above the new armoury, and a steeple should be dispensed with. All the brick buildings within the Tower being cleared away, a range of buildings in the form of an inner castle, *two stories high*, should be erected with white stone and battlemented, terraced and loopholed, which would serve for lodgings for soldiers or yeomen, in the upper story; and shops and workshops of artificers on the ground floor, or dwellings for people who are permanently fixed in the Tower. This inner castle would be seen from outside the Tower clearly over the new low armoury; and the old White Tower would be seen overtopping the new inner castle, thus displaying at one *coup d'œil* the appearance of *works within works*, or castle within castle, as one sometimes sees in pictures of ancient castles, than which, nothing can look more grand or romantic. If the old White Tower is in want of any repairs it should be repaired exactly as it is and conformably to its age.

The Tower gateways and gates, portcullises, and drawbridges, watch-towers, turrets, and everything else that can give it the appearance of an ancient castle should be restored, and in such a way as to be seen from the outside; the beams and chains of the drawbridges being made purposely visible. Those miserable wooden palings, railings, and gates outside the Tower gateways are a great disfigurement and disgrace to the castle, and should be removed and abolished, together with the adjoining brick houses and guard-house; and the moat or wet ditch should be the only outer defence. It is much to be regretted that the moat is to be filled up, as it was not only a capital place for a swimming bath, on account of its capacious extent, but it was safe and perfectly retired from public view, unless, indeed, females went to the margin or parapet expressly for the purpose of viewing the bathers. There is scarcely another place in the metropolis so well calculated in every respect for a swimming tank as the Tower-ditch. Some people make a foolish noise about indecent exposure of bathers; but it is all rank prudery and nonsense. The river-face of the Tower should also be cleared of the brick buildings, and the river-rampart should be cased with white stone, and battlemented, and turretted; and the Tower wharf should be an open free thoroughfare to the public, as it was formerly, and the gates should be removed and abolished.

No cannon larger than a three-pounder should be in the bastions, and these should be brass, and only kept there for firing salutes on rejoicings.

The ramparts and walls should be open and free

to the public, who should enjoy the liberty of promenading entirely round the Tower thereon. Sentinels in ancient dress or armour, armed with the ancient spear, should guard the ramparts.

The low parts of the ground inside the Tower should be raised with earth, so as to make the whole interior on one level, and *that* a higher level; and thus do away with the disagreeable up and down sloping ground, which is particularly slippery and dangerous, in frosty weather, and annoying at all times. By these alterations a larger open space would be gained within the Tower, for the parade or exercise of troops: there would also be more available room for grass-plots and shrubberies in other parts of the interior.

The fittings-up of all the castellated buildings of the Tower should be in keeping with their outward gothic architecture; and being a place entirely appropriated for ancient and warlike show, it would be a very popular and favourite resort of the citizens of London and visitors, instead of being an object of jealousy, and a fort that seemed held only to overawe a London populace.

But if we cannot trust to the loyalty of the people for the safety of the Tower, or the sacred guardianship of the military stores usually kept there, without bolting and barring them out like foreign enemies, and other unnecessary jealous precautions, it would be far better to at once remove the ammunition, arms, and military stores from the Tower to Woolwich, and build a new fort somewhere else, expressly for their reception and safe keep, and the sooner the better; but at all events let the most free ingress and egress to the

Tower at all times exist, and let the fortress be completely renovated, and preserved as an ancient relic.

One of the most abhorred uses of the Tower is that of making it a prison for state-prisoners, whilst on the other hand it is a complete mockery and ridicule in modern times for the House of Commons to order people into confinement in the Tower. Now, there should not be suffered another state-prisoner to be confined there any more; the custom ought to be done away: and as there are plenty of prisons, equally as convenient, and as well fitted up and furnished as the Tower, let one be especially appointed for state-prisoners, and let some improvements be added to it for such a purpose, such as a bath, a garden, a tennis-court for exercise, &c. &c.; so that an innocent man may not have his health injured by confinement, before he has been found guilty.

One word more about the Tower, in conclusion: As extensive improvements and alterations have been proposed and announced in the newspapers as about to take place in the Tower, in consequence of the late dreadful conflagration, and one of those alterations is the filling up of the wet ditch, which in our humble opinion is a grievous and injurious alteration, as far as it regards the appearance of the Tower; we would propose and recommend an alteration of the *ground plan of the outline* of the Tower, and not fill up the ditch. The following is the plan we think would add greatly to the romantic appearance and venerable style of the Tower fortifications, without any great expense, and without departing from the rules of ancient

castle architecture, viz. :—In place of only three front circular bastions, let the ramparts on the land side be extended and lengthened in a straight line, (parallel with the river) sufficiently long to admit of five *round* bastions, instead of only three, (and as there are already three round bastions, this plan would require the erection of one round bastion, and a piece of curtain, at each end, and exactly in a line with what would then be the three middle round bastions), and as this might be accomplished in the site of the present ditch, it would only lessen the width of the ditch a little, but it would add materially to the space in the interior of the Tower, which must be acknowledged to be a great acquisition, and yet no loss to the ditch, as the latter is wider than it need be, considering that it is no longer used as a defence. Yet a narrow ditch is better than no ditch; the Tower would lose half its romantic appearance without a wet ditch and drawbridge.

An alteration of the Tower according to the foregoing plan, would enlarge the interior, and give the exterior the appearance of an ancient castle, having *five round* bastions *exactly in one line,* in its front face, (the centre bastion which now projects, should be thrown back in a line with the other bastions), which might *all be seen at once* from Tower-Hill, and would resemble many very ancient forts that I have seen in India, the romantic appearance of which always filled me with indescribable feelings of delight, veneration and admiration; indeed, no one who has not seen such places can imagine or form any idea of the romantic sensations they give rise to, and how

they carry the mind back to ages and scenes of an ancient world. The Tower of London is capable of all these alterations and improvements, and is well worthy of any expense, as the most revered relic of the metropolis.

THE ISLE OF DOGS.

I think no one can look upon this extraordinary bend in the river Thames and in the land (the Isle of Dogs), without being struck with its peculiar situation relative to the metropolis. Its shape and extent, and its position are concomitant qualities which together so admirably fits it for a military depôt for stores, a garrison for troops, or an impregnable fortress, that it is wonderful it should have been neglected and overlooked by the Government for so great a length of time.

Situated as it is, to the eastward of the metropolis, instead of to the westward, it seems placed so by nature to form a "lock and key" to London against any sudden incursion from a foreign foe by a fleet of steamers, loaded with troops, however numerous; for with batteries all round the Isle of Dogs, and good ramparts, it is certain an enemy's fleet could pass no further; and with tiers of sixty-eight pounders, on a level with the water, the narrowness of the river here would ensure the speedy destruction of a thousand steamers at once.

Its shape and extent are admirably contrived by nature for the erection of a roomy fortress or depôt for a large body of troops. It covers a space of nearly a square mile in extent, which would not only admit of ample ramparts and

bastions but also of fosse within fosse, and line within line of ravelins, half-moons, detached bastions, &c., &c., and in short, of every work that will add strength to, or can be named in fortification; and such works could be marked out and added from time to time to make the expense fall lighter on the Government. Within the centre of the fortress there might be one or two large square grass or gravelled fields, for the exercise and health of a numerous garrison; and these squares might be ornamented all round with walks or malls, and rows of trees; and handsome airy barracks two stories high, with little gardens; besides bomb-proof magazines, and storehouses only one story high. Government is in the habit of keeping most of the troops at the West end of the town, but surely the greater number ought to be stationed at the East end of London, for that is the quarter which would be first assailed by a Russian-French fleet and army, in the event of any future war; and the mode of carrying on a war, and of attack and defence may yet be so greatly altered by new discoveries in connection with steam power and steam fleets, that sudden and unexpected inroads from an enterprising and cunning enemy may easily be conceived and executed. In all future wars, London will be aimed at, on account of its splendour, its riches, and its want of defences, the same as Paris has hitherto been; and it would not be unwise or improvident to prepare in peace time for all contingencies of a future war.

The position of the Isle of Dogs is such, that it must be attacked by water, for it could scarcely be attacked from the land-side on account of the

West India Docks which nearly cover it; but if the fortress were attacked from that side, the enemy's army, though ever so numerous, might be harassed by one hundred thousand London volunteers, until more regular troops could be collected from the country garrisons. If assailed from the river, the enemy must erect his batteries on the opposite shore, say in Rotherhithe, Deptford, Greenwich, &c. (for no floating battery could live a moment above water against the heavy projectiles from the fort), and supposing the height of the ground at Greenwich or Deptford afforded the enemy some little advantage, yet they could never advance their batteries a single inch nearer, and therefore they would find it a tedious job to breach the works, nor would they gain any thing by bombarding the place with shells further than the loss of their time and ammunition, &c., for it could not be besieged as the citadel of Antwerp was: and, upon the whole, I think a good strong regular fortification, occupying the whole plain of the Isle of Dogs, would not only be perfectly impregnable, but the very safe-guard and life and soul of the metropolis.

At times, when the regular troops were not in sufficient numbers to guard the Fort in time of war, one or more regiments of London Volunteers might do duty there for alternate fortnights, which would be of great use to the volunteers themselves, in making them acquainted with a part of their military duty. Some disaffected people might excite opposition to the fortifying of the Isle of Dogs, by objecting that the government were doing it in order to overawe the populace of London

with a large force of regular troops; but although a large force might usefully be collected there occasionally, and even be called upon in time of mob tumult, yet the distance from the City is sufficiently far, not to give much weight to the objection: and the more such an objection was urged, the more determined ought Government to be to take the hint and fortify the Isle.

I know not in whom the property of the Isle of Dogs is vested, but at any rate it is worth very little at present, being so low that it is seven feet below high water mark, and consequently can only afford a little grazing pasture for cattle. If it be private property, the Government should immediately purchase it, and adopt the following plan for raising its surface seven feet above the highest tide that has ever been known; viz.—A harbour is much wanted for the sole reception of colliers, which come to London by thousands, now that coal is so much wanted for steam, and it is proposed to dig a creek or a new basin for colliers alone, somewhere to the eastward of the East India Docks; but it would be a mile or two nearer London, and more convenient, to dig a basin a little to the north of the West India Docks (in Poplar), and make the basin about four times as large again as the latter docks, and cart all the excavated earth into the Isle of Dogs, raising and levelling it all over, within the lines (which should be previously staked out) of the proposed ramparts: for as the basin must be made somewhere, it might as well be made at Poplar, and by so doing, add an additional defence to the proposed fort, and an additional obstacle against an enemy;

also as the earth must be carted somewhere, it may as well be carted to the Isle, and thus "kill two birds with one stone," as the old saying has it. The ramparts would be formed with the earth excavated out of the intended fosses, and the latter might be made the widest and deepest of any fort-ditches in Europe, and so enable the ramparts to be made the broadest and highest of any in Europe, upon which a charming promenade would exist for the ladies of the garrison and the friends generally of the troops.

There is a small indentation in the shore of the river between the East India and West India Docks, called "Old Dock;" this place should be made the entrance to the Collier's Basin, and, in fact, the colliers might be towed out into the river by the same cut.

With respect to the laying out of the Fort, the works should all be staked out first, and should cover the whole Isle, merely leaving a sufficient breadth all round the margin next the river to be formed into a glaçis: and then the shell merely of the very outer works and line of ramparts should be built of brick, thus as it were, forming the skeleton of the fortress, which could be done at a moderate expense. The enclosure thus meagrely accomplished, would at once permit of the erection of one range of barracks and the reception of a small corps of military; and the filling in of the works with earth, the erection of more works and buildings, and the finishing and beautifying of the Fort would naturally be an affair of many years, but by a persevering continuance of labour, and the cost spread over a number of years, the place

would at last come out of the hands of the workmen like a finished jewel from a goldsmith's shop, and might be the strength of London and the pride of England.

Of course the ramparts should be cased with bricks or stone inside, and with earth outside, like the citadel of Hull; but if the foundation is not good on the Isle of Dogs, or is so soft as to risk the sinking of the masonry, I do not know a better plan than to dig several thousand wells, in rows, close together, at the bottom of the excavations for the ramparts, and fill them all up with brickbats. They ought to be thirty or forty feet deep, and about three feet in diameter; and if the earth or sand falls in during the digging, they should be hooped with thick earthenware hoops, each hoop about two and a half inches thick, and five inches deep, laid one upon another, and sinking down gradually as the well-digger descends: this method makes a capital firm foundation in a loose sandy soil. These wells could be either pumped dry where the water trickled in during the digging, or they might be scooped down within small diving-bells. If the foundation be in blue clay or gravel, there would be no necessity for sinking wells of brickbats.

It might be feared that the Isle of Dogs, lying so low, would prove unhealthy to the troops; and so it might, were troops stationed there in its present state of nature; but with all the improvements of good buildings, good drainage, raised surface, and the smoke of inhabited barracks, the climate and salubrity of the place would be so completely metamorphosed, that there could be no

longer any doubt or apprehension of an unhealthy or unwholesome atmosphere.

The old Tower of London is in no way adapted either for self-defence or the defence of the city-waters, and is only worthy of being repaired and preserved, on account of its antiquity and venerable appearance, and a place to look at, like any other haunted castle; and it should no longer be used as a state-prison. The last time that the dilapidations of the Tower-ramparts were repaired, the repairs were made with brick, which completely spoiled their appearance, as they were anciently cased with white stone.

Should a large strong fort be ever built on the Isle of Dogs, it might serve at some distant future time as a *point d'appui*, or starting-post, for a line of ramparts, to encircle the metropolis, whenever such a defence may be called for and rendered necessary: and it might be called Fort Waterloo.

It is a remarkable fact, that there is not a regular perfect fortification in all the British dominions, except Fort William at Calcutta, and Fort St. George at Madras; for such works as Hull Citadel, Portsmouth, Tilbury Fort, and others of like plan and size, do not deserve the name of forts; and as for Tilbury Fort, the Russians would walk into it pell-mell over the dead bodies of their comrades. There is not perhaps in all the world a river and a city as the Thames and London are, so completely exposed, so sadly neglected, and so culpably undefended: not a single battery or a single gun is planted anywhere, all the way from Tilbury Fort to London, except that paltry and absurd one at ——. God grant Eng-

land may never see a fleet of united foreign enemies in the Thames! for, with good pilots, there is nothing to prevent them from following in each other's wake, a trip up to London in one tide.

There was once a project on foot to shorten the navigation of the river, by cutting a broad strait or channel though the Isle of Dogs! Woe be to him, whoever does it!—for Nature formed the Isle to prevent the tide from rushing up to London too violently. The present canal across the Isle does no harm.

There have been various plans at different times, for forming wet docks and basins on the Isle of Dogs, and, perhaps it is providential that none hitherto have been accomplished. The first was a proposal made by the City, to form a dock of 102 acres in the Isle; the next was a plan by Mr. Wyatt, to form three docks in the Isle: another was by Mr. Spence, to form docks in the Isle, and to classify ships; another plan was by Mr. Walker, to cut a canal from the South side of the Isle to some docks in Wapping. Another plan was by Mr. Reaveley, to dig a new channel for the river through the Isle of Dogs. At last, a Bill passed Parliament, in 1835, for constructing wet docks in the Isle; but the project was abandoned: and God grant that it always may! for there is no calculating on the injury the river might receive if the Isle of Dogs were turned into a sheet of water. Perhaps some unexampled high spring tide, with other concomitant circumstances, might cause the Thames to break through the earth and masonry to the basin on one side, and break out again at the opposite side, thus

making a breach completely through the Isle, and washing all the ruins and debris into the river, choaking up the bed thereof at Limehouse Reach: now it would be impossible for an accident of this nature to happen if the Isle were filled up with a strong fort, and the ground within raised. I repeat, God grant that the Isle of Dogs may never be scooped out into basins of water !

CLASSIFICATION OF STREETS.

The principle I wish to establish for the classification of streets, is that of their width, not the size or style of the houses; for, all the houses of a street can seldom be of the same size; there will almost always be small ones intermixed with the large, in every street, on account of the varied means of the owners, some being wealthy, and some not wealthy. If a whole street belonged to one individual, and he a wealthy one, all the houses could be of one size and one style, if he chose to build them so; but this is a case that occurs so seldom, that it is best to fix the classification of streets by their width.

The utility of classifying streets, consists in this, that the width of each class may be fixed and made permanent by Act of Parliament, so that all builders may know for the future, that it is compulsory to build a street of a certain convenient width, and that it is the law of the land, from which they may not deviate through caprice, nor no longer spoil towns, nor run up little paltry narrow streets that induce filth, injure health, and render the thoroughfare difficult and awkward to the

traffic of three carriages abreast, or passing each other at the same moment.

The principle of classifying streets being once established, and according to the following rules, they should be rigidly enforced and complied with.

First-class streets, such as Regent-street, in London, or the Boulevard de Montmartre, in Paris, should never be less than one hundred and fifty feet in width, including a foot-pavement on each side, of from twelve to eighteen feet wide each.

Second-class streets, such as Cheapside and the Strand, in London, should not be of a less width than one hundred feet wide, including a foot-pavement on each side, from nine to twelve feet wide each.

Third-class streets should not be of a less width than will permit four carriages abreast, or passing each other at the same moment between the two side foot-pavements, each of which should not be less than eight feet wide.

Fourth-class streets should not be of a less width than will permit three carriages or carts abreast, or passing each other between the two side foot-pavements, which should not be less than five feet wide each.

No thoroughfare, narrower than the last, should be deemed a street, nor be permitted to enjoy the privilege of general traffic for any wheeled vehicles larger than a wheelbarrow; and such thoroughfares should be shut up at each end by a row of granite or iron posts, and be called "passages." If this rule were strictly enforced in all the towns of the kingdom, and builders knew it to be the law

of the land, they would take good care not to build any more abominably inconvenient narrow streets.

All old streets not agreeing with one or other of the foregoing classes, should be either turned into one-sided streets, as a temporary measure till they could be pulled down and rebuilt according to some one class; or they should be turned into passages or covered arcades, when and where the latter improvement might be desirable and practicable.

First-class streets might have two rows of dwarf elm-trees planted on each side, at the outer edge of the foot-pavement.

The poor streets should be built upon a more liberal, more comfortable, and more cleanable plan: and if fires and conflagrations are to be rendered less awful, and less destructive, narrow streets must be widened, even if at the expense of demolishing a whole side of a street, and making them one-sided streets.

There are some streets so narrow as only to be worthy of the denomination of "alleys," and they should be shut up with posts, and flagged over the whole length and breadth, with a covered iron gutter along the middle.

A penalty of 500*l.* should be levied on any person who builds or attempts to build a street of a less width than will admit three carts abreast, exclusive of ten feet more for two foot-pavements.

RAILWAYS IN THE CITY.

The greatest blunder that the citizens of London have committed for many years, is the having permitted the Blackwall Railway to be brought

into the City:—the Minories, which was a good handsome street before, is now utterly spoiled for ever; and the quick returning periodical noise of the trains, on a level with bedroom floors, across quiet lanes and back streets, will ever be felt as a heavy curse, and to sick people an insupportable nuisance. How many more railways and stations are to be brought into London we know not, but this we know, and certain people will feel it, namely, that wherever a railway crosses over a street, it injures the property of the landlord, spoils the appearance of the street, disturbs the quiet of the inhabitants, blocks up the current of air and injures their health, and takes from a number of poor coachmen and cabmen their daily livelihood. It would be well to offer a stout resistance to any more attempts to bring railways or stations into London, The injury to the appearance of that fine street the Minories is deeply to be regretted, and the more we contemplate it, the more satisfied we feel in our opinion, of the very great disfigurement inflicted on that street.

THE EGYPTIAN OBELISK.

His Highness, the Pacha of Egypt, some years ago, presented to France and England an obelisk a-piece, and our scientific neighbours across the water immediately set to work to invent machines for the removal of the obelisk, as well as a properly contrived ship for its conveyance to France, in which they fortunately succeeded without damage or accident, and it now stands the greatest ornament in Paris, a monument as honourable to the generous Pacha as it is to the French for their

ingenuity and patriotism in conveying it home. But how stands the case with the obelisk given to the English? Why, there it stands in Egypt still, a disgraceful memorial of those finical and sickly minds who exclaim against the removal from Egypt of its ancient ruins; a disgraceful memorial of English ingratitude in treating with contempt a gift so beautiful and valuable; a disgraceful memorial of inferiority in intellect in not being able to invent a scheme for its removal; and a memorial of our pauperism in not being able to afford a few thousand pounds, with a properly built ship, for its safe removal to London. The French got their obelisk safe home as soon as they could, but I very much doubt whether we have not lost ours for ever, for perhaps the next sovereign of Egypt may refuse to surrender it.

THE LONDON PYRAMID.

Some years ago a proposal was started, to erect a pyramid in or near London for a sepulchre for the dead; and a very dangerous place it would have been when it contained many hundred dead bodies, in such a wet climate as ours: but still, a pyramid exactly like one in Egypt would be a grand ornament to the metropolis, and it might be specially dedicated to the service of geological science. A pyramid, three hundred feet high and three hundred feet square at the base, should be built with blocks of stone from every rock in the world, each block three feet square, and each layer of stones composed of rocks of nearly the same colour, with the apex finished with white marble, and surrounded by a railing for the pro-

tection of landscape painters. All the shades of grey, black, and red granite should form the lower layers; next above them the basalts, sienites, red and green porphyry, serpentine, &c., and then all the coloured marbles: the interior, grottoes of stalactites.

THE GREEN PARK.

A great and striking improvement is proposed to be made in the appearance of Piccadilly, consequent upon the removal of the ranger's house in the Green Park. The alteration is to consist of a noble terrace and public walk, from the gate into the palace gardens at Hyde Park Corner, to the junction of the houses at the lower end of the basin. The form of the ground on this line is particularly favourable to picturesque effect, in laying out and planting, and to beauty of design in the parterre. Fountains and statues, too, are likely to be introduced to add to the grandeur of the plan, give encouragement to the arts, and to combine the whole with the palatial residence of the sovereign, by carrying it, perhaps, further on hereafter along the line opposite to Grosvenor-place.

It is to be hoped that there will be also many stone seats, and one or two sheltered watering corners, so constructed as to prevent any immoral conduct, be free from offence to decency, and afford convenience to large congresses of respectable pleasure-seekers, the same as is the case in the palace grounds at Paris.

We still want a *Bois-de-Boulogne* or Wood, and an *Avenue de Neuilly* or Equestrianade; for the

Drive in Hyde Park cannot bear comparison with the latter.

With respect to the first, a beautiful wood might be planted at Bayswater, where the surface of the ground is undulating, and extend round in a sweep to Hampstead Hill, and a drive might be made through it from Kensington Palace gardens.

With respect to the second, an Avenue de Neuilly might be formed and planted, from Grosvenor-place (near the Royal Mews), through all the little blocks of houses down to the river Thames at the proposed new bridge, nearly opposite Lambeth palace; and if a river-terrace were formed from the said new bridge to the new houses of Parliament, there could not be found, in all London, a more eligible spot or line for an Avenue de Neuilly. The reader will ask what is an Avenue de Neuilly? It is a perfectly straight road, of magnificent width, with three or four rows of trees on each side its whole length (and leads from Paris to Neuilly). This avenue would cut through a place called the Artillery Ground, and the Westminster Gas Works, but no other buildings of any consequence. A few blocks of houses would have to come down.

Thus a communication would be formed between the residences of the sovereign and the primate of all England, also a delightful road from St. James's Park to the proposed Lambeth Park, &c., making the avenue in every respect useful as well as pleasurable.

The proposed Lambeth-bridge should consist of twelve sharp-pointed gothic arches, with a small gothic spire over each arch, and the whole of its

architecture should be in gothic keeping with the venerable residence of the head minister of the church. The little spires should be hollow, roofed, and have seats within.

It is reported that the Coventry family have refused to surrender the ground in the Green Park, opposite Coventry House, they having it on lease for sixty years. Does not this show the thoughtlessness of granting leases of public property, without some discretionary clause, to the effect that such lease should cease when required by the public, on paying a reasonable compensation for the surrender? It is to be hoped that some exchange will be made with that noble family for the ground in question without injury to them.

THE LAW COURTS.

Although the following paragraph has already appeared in print, it is inserted here in order to draw fresh attention to its judicious suggestions:—

"A correspondent, who wisely opposes the obliteration of Lincoln's-inn-fields, a space which should be secured and opened for public recreation, says, let the whole neighbourhood of Shire-lane (including all the alleys and passages between Lincoln's-inn and Fleet-street on the north and south, and Chancery-lane and Clement's Inn on the east and west) be cleared away, an ample space would then be afforded * for the erection of a pile of building which would be an ornament to the metropolis. Temple Bar might be converted into a medium of communication between the Temple and the proposed new courts of law, by

* A capital site for a splendid Palais Royal.

means of the chamber over the central arch, and approaches to be constructed on either side. The increased value of the property would very soon repay much of the expense incurred; and the convenience which would result, both to the profession and to the public generally, from thus constructing one compact legal colony would be incalculable."

We entirely agree with the writer in deprecating the obliteration of Lincoln's-inn-fields, and we say, God forbid that that or any other square should be built over! There are not half enough open places or squares in the metropolis for so large and crowded a city, and if this open space be suffered to be obliterated, it will be a bad precedent, and we should soon see other squares destroyed in the same insane manner. Streets may be compared to valleys and defiles between different kinds of hills, but open squares are like oases of atmospheric air, in the midst of a country poisoned with smoke. We enter our earnest protest against any plan for blocking up the square called Lincoln's-inn-fields. We cannot approve of the writer's suggestion for turning Temple-bar into a bridge over the street for the mere purpose of saving the gentlemen of the law from dirtying their shoes; as we have elsewhere recommended a carriage way to be made on each side of the bar, by the widening of the street and removal of the houses adjoining it. We also recommended the Bar and Gates to be removed.

The clearing away of Shire-lane, and all the courts, alleys, passages, and holes in that locality would be an excellent operation upon that

sick part of London, and "heal the sores thereof, for it shaketh."

WOOD PAVEMENT.

The invention of wood pavement is likely to produce a great change in the construction of thoroughfares. The experiment which was commenced in Oxford-street, London, in December 1838, has succeeded beyond the most sanguine expectations; it having been found to bear, without shrinking, for nearly four years, the unceasing traffick of one of the busiest thoroughfares in the metropolis, and subject to all the influences of different degrees of heat and cold, draught and moisture. The pavement is the invention of D. Stead, Esq., and consists of hexagonal wood blocks of six or seven inches in diameter, and nine inches deep, having the fibre upwards, and bevelled at the edges. The advantages of wood pavement consist in a degree of smoothness which cannot be given to a road paved with stone, the absence of noise, and a freedom from mud and dust, which is alone sufficient to recommend them to the inhabitants of populous places. It appears that pavement of granite costs 14s. per square yard, whilst pavement of wood costs only 8s. or 8s. 6d., and the durability of the latter is nearly equal to that of the former. The surveyors of the highways in every town in the kingdom, should correspond with the agent of the proprietors of the patent, if they wish to avail themselves of this admirable invention.

Although wood pavement is much liked, and cannot be called an unpopular improvement, yet

it meets with a good deal of opposition from some people,* and reluctant approval from others, all springing from the same self-interested motives, viz.—the loss of those various classes who furnish stone pavement; and although it is laid down in several streets in London, it seems confined to the vicinity of the churches, for the sake of doing away with the noise of the coaches during divine service on Sundays.

There is not one single source of human happiness, says a modern author, against which there have not been uttered the most portentous, threatening, self-interested warnings and predictions. Canals, turnpike-roads, vaccination, reform, infant schools, railways, emigration, wood-pavement, decimal coinage, &c., &c. There are always numbers of worthy, and moderately gifted men, who bawl out death and ruin upon every improvement which the varying aspect of human affairs absolutely requires, or science discovers. If the hatred and abuse that all the various changes have experienced, which are now admitted to be marked improvements in our condition, could be collected, the history might make folly a little more modest and suspicious of its own decisions.

A few more alterations and improvements in and around London may be hinted at here, before we close our remarks on the metropolis.

Supposing a Quay-street or river-parade should be formed all along the river side from the Tower

* The City of Cassan was burnt down, as the horses would not draw the fire engines over the burning pavement!—Drivers of coaches, and also cavalry soldiers say their horses cannot be pulled up on wood pavement.

to Westminster-bridge; the South side of St. Paul's Church-yard should be widened, and an opening made from thence down to the said new Quay-street, and waterside, one hundred and eighty feet wide; and a new public building should be erected for Doctors Commons and the Registry of Wills Office.

Carey's new map of London, for 1842, exhibits a great deficiency of squares in the Northern and Eastern parts of the metropolis; now squares in a great crowded noisy City are such delightful places for private residences, and so airy and healthy, that it will not be amiss to point out where they would be useful, in order that capitalists in the building line may erect a few, as the houses now occupying the ground become old and useless.

A series or line of squares, angle to angle, would be a very agreeable route for visitors to Victoria Park, if built in a contiguous line from Finsbury-square to that park. They should be large noble squares.

Another series of squares would look well, and be very useful, extending from the Artillery-ground, Bunhill-row, to the New cattle-market, Islington. Every house in a square should have a rood of ground at the back. And another line of squares would be useful, extending from Goodman's-fields (Minories) Eastward, to the Tower Hamlets' Cemetery.

Squares should also be encouraged in Southwark, which is a portion of the metropolis singularly deficient in these agreeable spots of green.

A fine straight road or avenue might be carried

from St. James's Park, through Chelsea road to the Royal Hospital at Chelsea; and a chain bridge of two piers (or equal to three arches over the Thames) might be thrown over the river at that spot, for light carriages only.

In looking over Carey's excellent map, it discovers a beautiful plot of ground of about four hundred acres, almost vacant, between Islington, Camden Town, and Pancras, fit for a Park and wood. Also near London-fields, Hackney, is another fine plot of vacant ground of three hundred acres, fit for a Park; and exactly between these two plots, is a third vacant space, admirably suited for a park, though small.

It would give some pleasing variety and novelty to the parks if the houses and other buildings in each park were of a different order of architecture; thus, all the edifices in Victoria Park might be on the Chinese plan, such as Chinese pagodas, numerous small flags, and vanes, and streamers, arches, low houses of many rooms, all on the ground-floor, Chinese railings, fish-ponds, artificial rocks and bridges, fancifully decorated, and the houses painted red, white and blue outside, and the park would be known by two names, the Victoria, or Chinese Park. Another park might be surrounded by old towers, haunted castles, ancient baronial houses and buildings of the most antique description, all fortified with turrets and loop-hooles as for ancient war. Another park might be surrounded by church-like houses of ecclesiastical gothic architecture, rural thatched cottages, holy crosses, holy wells and springs, rustic bridges of primitive construction, &c. &c. And another park might

display a goodly circle of tall buildings in the Turkish style, of cupolas, minarets, turretted mosques, crescents, &c. &c.; so that a stranger visiting any one of the new parks, might fancy himself all of a sudden arrived in China, Turkey, or some other foreign country.

We recommend the building of two noble, long, splendid rooms in Victoria Park, on the plan of the picture-gallery in the Louvre at Paris, each room to be one thousand feet long by thirty-five broad, with windows on both sides, and connected together by the same line of roof, forming a building two thousand feet in length, the floor (a stone one) raised above the level of the ground ten feet, but not to have any rooms or hollow places under it; the roof to be of iron, and no wood employed in the building, so that there shall never be any danger of fire. One room to be called the Miscellaneous Picture-gallery, the other room the Miscellaneous Museum. The first, for the reception, unconditionally, of the thousands of pictures and drawings that are rejected every year by the Royal Academy, and with a retrospective admission for all the pictures of past years, and the works of all painters and artists, whether British or foreign; the pictures to remain there as long as the owners pleased, for sale or not for sale, and without expense to artists; the public to pay one shilling each for admission, and the gallery to be opened every day throughout the year, except on Sundays, Christmas Day, and Good Friday.

As the population goes on increasing, artists will also increase, and if some such gallery be not

erected, they must be ruined and starved, and people who are fond of pictures, but not judges of painting, must be disappointed, for to the latter class (and they are the great majority) it is all one whether they look at a Raphael or a public-house sign-board, so that it be a pretty showy painting.

We know not whether there would not be as much amusement, perhaps we might say, fun, in looking at the lame attempts of would-be artists, as would compensate for the difference between the National Gallery and this gallery, at least to many spectators.

The National Gallery in Trafalgar-square is too small and too confined for any exhibition worthy of the metropolis. Two back-door wings ought to be added to the National Gallery at the back of the building.

We need not point out the utility of the room for the Miscellaneous Museum. The British Museum is already gorged to overflowing with almost every wonderful thing that the world produces. What is to become of all the thousands of curiosities that will arrive in England during the next one hundred years? Answer,—Another museum must be erected for them.

The Grand Surrey Canal and Camberwell Canal should be carried on straight to Nine Elms at South Lambeth, and it would thus form a ready-made line of defence, in anticipation of any rampart or breastwork which it might be necessary to throw up at a moment's warning, in case of invasion in any future war. The soil excavated from this proposed continuation of the canal, should be

carted to one of the intended parks of Lambeth or Newington Butts, and formed into an ornamental hill, which would be a pleasing novelty in this low, damp, and level district.

The width of all canals should be fixed by law, and they should never be of a less width than ninety feet, except at the places where locks and gates are fixed.

Bridges across rivers and canals should never be further apart than half-a-mile, nor nearer together than a quarter of a mile: when they are at a less minimum distance than the latter, they obstruct the sight of spectators looking up or down a river, and spoil the view of a river as much as if one or two more new bridges were erected across the Thames between Westminster-bridge and London-bridge would.

It is to be regretted that the parapet-walls of the new London-bridge were not finished with open balustrades, in the same style as the old bridge was. The rising generation was surely forgotten here. Boys and girls are curious people, especially English boys and girls, (God bless them!) and they *must* see everything. Now, whenever there is a splendid procession on the Thames, young people cannot look through the balustrades as formerly, but they must climb upon the parapet-walls, at risk and inconvenience to themselves; and children passing London-bridge at any other time, lose entirely the sight of the river for want of balustrades.

It is to be hoped that the embankments of the River Thames in the city of London will be finished with very low parapet-walls, surmounted

with a low balustrade, so that men can see over it and children see through it.

The improvements in Cateaton-street should be carried on straight to Bull-and-Mouth-street, Aldersgate-street, and thus form a wide thoroughfare to the General Post-office.

If there is one thing more than another that is to be deeply regretted in the new site of the new Houses of Parliament, it is the having built them on the very bank of the River Thames, their foundations being actually laid in the water, and projecting into the river, (if Carey's new map of London be correct,) thus making it impossible to carry a road along the river-side between the water and the pile of building. It is inconceivable what could be the inducements and secret motives for crowding this handsome building into the river! Was it for fear of a second gunpowder plot? Was it done as a means of safety from the violence of an enraged London mob?—or to guard against fire?—or that our noble legislators might step from their ships into the senate-house? Whatever was the reason, the present site has conferred an eternal disappointment on poor London. I would they were pulled down and rebuilt some distance to the westward of Westminster Hall, with their front and back elevation facing East and West, and their South end abutting on a road along the river-side, and thus forming with Westminster Hall two sides of an immense open square, with the river-road along its South side, which square might be grass and shrubbery, or it might be only gravelled all over, and a statue of Queen Victoria in the middle. The East end of this capacious

square might also have been fenced with iron rails, and a small marble arch in the middle of the line of rails, like that in front of the palace of the Tuileries at Paris, which latter superb edifice is placed so advantageously with one end abutting on the River Seine, that the delighted Parisians can enjoy every day the view of both fronts without the trouble of going on the water to see one of them, as the poor disappointed Londoners are.

Seven Dials.—There is a small open spot called Seven Dials, between Monmouth-street, King-street, and St. Martin's-lane, so consummately disagreeable to look at, and surrounded by seven stacks of houses, so forlorn and miserable in their appearance, that I do not know another place in London that looks more bare-boned, disreputable, and dreary, or more like a desert in a city. If these seven blocks of houses were cleared away, and a grand and large square formed on the site, with grass and shrubbery, and a detached *open* colonnade (about fourteen feet high) made round the enclosure, distinct from the houses, what a nice sheltered promenade and beautiful novelty in the architectural line would it be; and what a delightful line of communication would St. Martin's-lane then form with Broad-street, Bloomsbury; and what an improvement it would be to that part of the metropolis, so completely devoid of a respectable neighbourhood, as it is at present! The inhabitants of these disagreeable looking houses (around Seven Dials) could not fail of being benefitted by their removal to any other locality whatever; for no other place could possibly look so

cheerless and melancholy as this said open spot, and its surrounding little streets.

Holborn Viaduct. — A Viaduct at Holborn-bridge, from Snow-hill to Holborn-hill, has been long talked of. If ever this project be carried into execution,—and I think it ought,—it should be so formed as to look like a city-gate or triumphal-arch, as seen from Farringdon-street, with a *couple* of small arches on *each side* for footways; and if the elevation be planned after this manner, with any degree of taste, it will not spoil Farringdon-street in the way that the Minories is disfigured by the Railway-bridge. It must not be forgotten also, that although a Viaduct should actually be accomplished, still there must be kept open a carriage-way down the two hills from Holborn and Snow-hill to Farringdon-street; and in order that the Viaduct, and the said two descents to the latter street may be each of a noble width, the whole space at Holborn-bridge must be made an immense deal wider than it is at present.

A Walhalla or *Pantheon* should be erected in the intended Park at Finsbury, for monuments and statues of the illustrious dead; and it strikes me that a noble pyramid, 800 feet square at its base, and 800 feet high, full of galleries, would be a far more appropriate edifice for the reception of statues, tombs, monuments, and tablets, than a site crowded with coffins, full of stinking dead bodies. And there would be no danger to the health of people visiting the sacred mementos of their relatives and friends, in such a pile, if it were kept well warmed and ventillated.

The following would be a really useful improvement, to join Whitechapel-road to Oxford-street:—viz., begin at Gray's Inn or Furnival's Inn, in Holborn, and drive a wide street through all the blocks of houses, from thence to West-street, commonly called Chick-lane; widen the latter, and drive a wide street from thence to the west-end of London Wall; widen the latter, and drive a wide street from thence to Wentworth-street; widen the latter, and continue the wide street till it opened out into Whitechapel-road, near the London Hospital. This line would form a grand thoroughfare through what may now be properly called the centre of London, and it would be straight and level throughout, and highly useful to the increasing population of the North-eastern suburbs of the metropolis.

The foot-pavement in front of the Mansion-house is not wide enough by six feet; for, independent of the great throng of people occasionally passing on the footway, the distance of the crossing from Cornhill is so great, and the carriages and carts so numerous, that it is at the imminent risk of many people's lives and limbs that they get over safe. An extension of the foot-pavement of only six feet would do away with a great deal of the risk.

A small open square or crescent should be made in front of the East India House, and an arcade opening into the centre of the crescent or square; the handsome front of the India House would then be seen to the greatest advantage, and the crescent or square would be as much an ornament to the latter as the whole together would be an improvement to the neighbourhood.

Victoria Avenue.—Having in a previous page recommended an Avenue to be formed, to connect the different Parks, and having well studied the subject, the chief difficulties of which arise out of the numerous obstacles from new buildings springing up with such incredible speed all round the metropolis; it may be as well to point out the only line (and it should be a perfectly straight line) which, at present, has the fewest streets to cut through, and fewest obstacles to forming the "North Avenue," on the North side of London.

I begin at the North-east angle of the Regent's Park, say at the York and Albany Tavern, and cut through two or three small streets, straight to St. George's and St. Giles' burying-ground, through part of that ground, straight to White Conduit-lane, (requiring only one bridge over the Regent's Canal,) thence through twelve small streets or blocks of houses, called Islington, (passing by the South sides of Cloudesley-square, Gibson-square, and some white lead works,) thence to the North of Whitmore's mad house, and a basin near Kingsland-road (no bridge required,) cutting through one small street there, and continuing the Avenue to the south end of Lansdown-place, London-fields, and from thence crossing Mare-street, Hackney, to Grove-street, and turning with a small sweep round to the South, enter Victoria Park near Providence-row.

There is no other line, so near London, but this, that affords so much open country quite free from houses, water, or any other obstacles, but the few small streets before mentioned. And it is im-

possible that any owner of property could object to the avenue, as it would greatly increase the respectability of his neighbourhood and the value of his estate.

The Avenue-road should be somewhat elevated above the level of the country; have four rows of trees on each side; be perfectly straight the whole distance of four miles, with a circle at each quarter of a mile, and an obelisk in each circle; and the width of the road three hundred feet throughout.

It would form a grand boundary, as it were, to the North-side of the metropolis; and any future Parks formed along its course could be easily joined to the avenue, whether they were to the North or South of it. The expense would not be much, and I think one thousand small square plots of ground, for villas to be built on both sides its whole length, would pay the cost. The *sine qua non*, is, it must be *straight* the whole length of four miles, or the novelty and beauty of the mall would not be worth a rush.

The East Avenue could be formed (from Victoria Park) along Grove-road, and across Bow-common down to the Isle of Dogs, or the fortress to be built thereon. There are very few obstacles on this line, and only one bridge required.

The South Avenue, to the South of Southwark, might be formed any where from South Lambeth to the Camberwell and Grand Surrey Canals, and along the said Canals, without difficulty now, as much of the ground is nearly open; but it should be marked out quickly, or in a very few years, the increase of buildings will render it impossible.

Elysium Fields, and *Field of Mars*, are two other desiderata in the city of London. I should recommend about ten acres of ground to be cleared in the rear of the Mansion-house, for the former happy locality, and have it laid out in walks, studded with statues, planted with small standard trees (no flower beds), and seats fixed in various places: and if a fountain, on a handsome scale, could be contrived in it, it would be a delightful spot in the very heart of the City, well deserving the title of Elysium. The Field of Mars should be an open level plain of about twelve acres, perfectly square, and always be clean gravelled and kept free from grass, vegetation, trees, and every intruding obstacle: it might be situated any where in the parish of Whitechapel, but I think the neighbourhood of Goodman's-fields would be very suitable. This gravelled plain should be appropriated for the public meetings of the Queen's subjects, as a *safety-valve*, where they could unbosom their grievances, when they had any, evaporate their passions in speeches, let out their secrets, make known their wants in an open and honest manner becoming Englishmen, and by concocting their petitions in the open air, not drive them to secret sedition in lurking-dens, where rebellion can be matured unknown to the authorities, and no steps be taken to prevent the sudden burst of unexpected (and therefore unprepared-for) and dangerous riots and violence.

Foot-bridge over the Thames. There is a scheme in progress to erect a Foot-bridge across the river opposite Hungerford Market, which I very much regret; for it quite spoils the view up and down

the river, already sufficiently intercepted by a sufficient number of bridges. Surely the Southwarkites cannot be so badly off for fish that they must take the Strand fish-market by storm in this manner. Why should they *ford* the river at that particular spot and *hunger* after the Strand fish, when they might form a Strand on their own side, and build a *Hunger-ford* market there, if they had a molecule of spirit in their hearts, or an animalcule of wisdom in their phreno-mesmeric upper-stories, or a decimal shilling in their well-buttoned inexpressibles? I denounce the intended Foot-bridge, and prophecy that it will be taken by storm by the genii of the winds, or be carried away by the aerial steam-carriage, soaring along on the wings of Boreas and Æolus!

Grand Flight of Steps down to the Thames.—The first time I went up to London, after the old London bridge had been cleared away, I directed my steps towards Fish-street-hill, to feast my eyes on the grand flight of stone steps which I expected to see on the spot where the old bridge joined the shore; for although the Thames is not quite so grand a river as the Ganges, yet I naturally thought so fine an opportunity of forming a grand ghaut down to the water, like one of those at Benares, would not be lost, now that the first and only opening from the street to the river was effected by the total removal of a bridge. When I got to Fish-street-hill I could scarcely tell where I was, for there was neither bridge, nor river, nor ghaut to be seen: but after attentively considering the shops and the church, I became assured that

I was really at the bottom of Fish-street-hill, and that the sight of the water was blocked up by the erection of a high wall or a building of some kind! (the steam-packet office I believe.) The reader may guess my blank looks, my astonishment, disappointment, pain, and incredulity, for I could not for some time believe my own eyes.

After moralizing for some time on the different ways which men pursue to spoil their towns, I was fain to believe that it must be a sort of hydrophobia with which the Londoners are afflicted; for, on recurring to other streets that abut on the Thames, I recollected that the sight of the water had been most rigidly and carefully shut out, either by the erection of a house or a wall at the bottom of every street along the Strand; and that instead of a substantial iron-railing being placed across those streets near the water, and grand flights of steps leading down from thence to the river, people are obliged to ferret out the steep and break-neck stairs hidden up by the sides of the bridges, or down some narrow dirty lane or alley, whenever they want a gondola.

Perhaps the citizens are afraid that Old Father Thames might take it into his head to pay them a visit, and walk into the City, and steal off with some of their fine women during the dark nights; and so it is better to blind his eyes and prevent him from looking up the streets, the very sight of which might set his mouth a-watering; and if there is the least danger of the old fellow running off with the chief treasures of the City, the citizens cannot be too much applauded for the care they have taken of these jewels, by erecting walls at

the ends of all the streets. But I would balk Old Father Thames in a different manner: I would form a grand flight of steps down to the water the whole width of the street, fenced at the top with a noble iron railing, so stout, that even a troop of war-chariots should not be able to burst through it, and I would plant a powerful gigantic Egyptian sphinx, on each side the flight of steps, with their faces to the water, so that the Old Father might be afraid of venturing up the steps, while he might employ all his time in endeavouring to solve their enigmas; or, as we are at peace with the Emperor of the Celestials, perhaps His Majesty would be so good as to send us a pair of live dragons (of the green species, as they are the fiercest), which would more effectually frighten Old Father Thames and keep him within bounds. Thus the citizens would get to their gondolas hung with crimson, sky-blue, and gold, without having to descend some narrow filthy alley.

However, as the bottom of Fish-street-hill is blocked up past recovery, a grand flight of steps should be formed at the Tower wharf, where the Lord Mayor often takes water for Westminster on his coronation day.

All that part of Kensington Gardens, to the East of the Serpentine water, should be added to Hyde Park, and that ridiculous high wall be pulled down; and to make up for this concession, the gardens should be extended a good distance on their Western side.

Who was the architect that planned the street by which the Mansion House and the Monument were brought together?—Whoever he was, he is

the man I should recommend to plan out and execute any alterations and improvements, which Government or the City authorities might contemplate for the metropolis, as I am sure he would do them justice and leave nothing to be desired.

And as for my own humble suggestions, let any map-maker take a large sheet map of London, and draw upon it all the improvements I have herein proposed, not omitting one, and I would venture a trifling odds, that people will say that London would be the most magnificent city in the world, if they were all accomplished: and, what would be worth all the rest, it would greatly stimulate the London shop trade, give extensive employment to all the labouring classes of the metropolis, and benefit the revenue by two millions sterling per annum.

YORK.

I visited York to see if any improvements could be suggested for this much neglected City, which the citizens have suffered, in this age of improvement, to be eclipsed in advancement by many a younger and less noted town. I had heard so much of this venerable City, the second capital of England, as it has been called, that I fully expected to see a large place half as big as London, with streets, certainly not swarming with human beings, (for I was told they were deserted and silent, and that the grass grew in them,) but exhibiting every evidence of the ancient age of romance. Great was

my disappointment: I found a small filthily-dirty, confined town, not much larger than Chester, built all awry, or all on one side of its principal centre of attraction, full of little, narrow, ugly crooked streets, of mean, poor, shabby, ill-looking houses, (neither gothic nor modern,) intersected by hundreds—I might almost say thousands of filthy, "cut-throat looking" lanes, courts, and alleys, many of them scarcely wide enough for a wheel-barrow. And so far from grass growing in the streets, there was such a crowded population on one particular day, (when they all came out of their dirty lanes,) that I found it no very pleasant job to squeeze myself through them.

There must be thousands of poor people living in the lanes and alleys in the most uncomfortable plight, for I picked my way as well as I could into many of these out-of-sight places, and could scarcely set my foot down on the ground for the horrible filth scattered about in every direction, which must be as injurious to the health of the natives, as it is sickening to a stranger, not accustomed to such shocking places, (and this filth runs into the river Ouse, which supplies them with water!) It was on a day of the races that I entered the City of York, and the first thing that stared me in the face, was a street called Coney-street, so narrow, that it was nearly blocked up with carriages laden with handsome ladies in splendid costume, returning from the races, and the carriages so entangled with one another in several places, that there was a dead stand, and no one could proceed for some time. As they all chose to drive through this said Coney-street, we

may suppose it to be the best or principal one in the City;—then what must the other streets be if this is the most respectable? In fact, there is not another street even so good as this, except Parliament-street, that I could find, after four days' traversing every street in the City.

If the respectable tradespeople of York desire to prosper,—if they have any wish to attract visitors to the City from all parts of England, and thereby benefit trade,—if they wish to make their City a city indeed, and such as will not only repay people for the trouble of coming to see it, but also tempt many to remain and take up a permanent residence in or near it, they must act upon the plans I am now going to detail; and I shall suggest such improvements as will make it one of the most beautiful and delightful ancient cities in England.

There are many things that I have to find fault with, and I shall speak of these first. Of what use was it to repair the ancient City-walls?—What good did the citizens propose to reap from their being kept up?—And what a heavy useless expense! It is true they are ancient relics, and venerable, but the romance and beauty of these walls are utterly spoilt and lost, through the fact of there being rows of houses and even streets outside them, nearly all round the town: thus they are blocked in and hidden from the sight of travellers approaching the place. Now, if these ancient fortifications were actually the outermost thing of all, so as to enclose the town, and there were no buildings beyond them, they would then appear warlike, and nothing could look more roman-

tic than the City would, viewed from the outside; but as it is, they are not only useless and almost out of sight, but perfectly injurious, inasmuch as they force people to go a long way round to get out of, or into the town, to any particular neighbourhood not near a gate. Perhaps it would not have cost much more to have erected lines of entirely new walls, but exactly resembling the old, in antiquity of appearance, all round the town in a more extended circumference, and embracing all the houses and streets at present outside of, and contiguous to the City. Any body can see that the old walls are a modern erection, for they have been rebuilt nearly from the ground; and however the citizens may please themselves with the thought of having preserved the old walls, they cannot cheat antiquarian strangers into a belief that they are the old walls.

It would have been much more useful, if the ruins of the City-walls had been all levelled and formed into a kind of wide embankment or raised promenade, planted with mulberry, horse-chesnut, or sycamore trees, on each side, and rustic chairs and seats fixed at regular distances: this would have been a pleasanter and safer walk than that on the top of the narrow walls which are lofty and have no parapet on the inner side, so that an invalid is in danger of turning giddy, or having a swimming of the head if he dares venture to take the air upon them. Now I would recommend the citizens to cease repairing the ancient walls, and in the course of another century they will be crumbling into ruins again, and then they should follow my advice and form them into wide pro-

menades and avenues on high and dry ridges of ground, which would be then so much the more agreeable and desirable, from the circumstance that the population and streets of the city will have multiplied on all sides, and will therefore require more ventilation and airy promenades within.

But being as fond of anciently fortified cities as anybody, (and I have seen them in perfection in the East,) I propose the following plan of keeping up the appearance of warlike walls, and giving to the City an outward aspect of being still enclosed with fortifications. I must, however, entirely change the ground plan of the City, and consider the Minster the centre, from which, and by which, all my new streets, walls, and squares, will be laid down, so as to ensure the greatest convenience and greatest beauty.

I surround the whole City, and part of the suburbs with a polygon of straight lines of houses in the form of defensive walls and towers, embracing as much ground to the North and North-west of the Minster as is built over on the East and South-east, thus placing the Cathedral exactly in the centre of the City. These long lines of houses should be built with their backs to the country, and without windows on that side, and their fronts facing inwards towards the Minster; the backs without windows should be built with stone, rough, like the old City-walls, and the parapets of their roofs should be battlemented, or castellated, and carried up so high as to hide their roofs from being seen from the side of the country: there should be a projecting house, either round or

square, as the case may be, at intervals of sixty or seventy yards in these "city-walls of houses," all round the City, to give them the appearance of towers, or tower-bastions; and there should be a line of loop-holes in the upper stories, or landing places of staircases, of the houses, as one sees in old castles sometimes: the houses should have no doors opening from the back into the country, but all their windows and doors should be in the front, say within the City, where each house could also have a large slip of ground for a garden or shrubbery adjoining to its front. Wherever a road or street leads out of the City, there should be a gothic arch of the most capacious dimensions through one of the houses, and the building should be turretted and ornamented with sundry other additions to make it look in every respect the same as an ancient gateway. The loopholes might be three and a-half feet long, and four or five inches wide, and might be glazed at the option of the inhabitants of each house. The chimneys are the only things that might spoil the delusive appearance of these fictitious walls of defence, but they should be so contrived and placed, as to give them the appearance of slender towers on the top of the walls (roofs), with appropriate miniature battlements.

This polygon of continuous lines of houses to surround the new ground-plan of the City of York in lieu of fortified walls, should have no open interval, or aperture, or break, through them anywhere, but only the arched gateways before mentioned.

We have thus given a brief sketch of a proposed

substitute for defensive walls and (fictitious) fortifications, and will now trace them on the ground-plan. This new line of defence and for the extension of the City to the North and North-west of the Minster, should commence half-a-mile North-east of the bridge (in Monk-street) over the River Foss, and be carried from thence to a quarter of a mile North of Lady Mill, with one salient angle; and from thence straight to Clifton (here another salient angle); and from thence straight down to the Ouse, half-a-mile West of the Yorkshire Museum. Crossing the river, the line should be carried straight to the angle of the old City-wall, near Micklegate Bar. The old wall would suffice from thence to the House of Correction; and from the latter, a new line might be carried (crossing the two rivers) straight to the salient angle West of Walmgate Bar; and from the latter Bar a new line should be carried straight to a point half-a-mile North of Laythorp Postern-bridge; and from that point should be continued straight to the place where we commenced. These new lines of artificial defence, forming eight sides of unequal length, would place the Minster in the centre of the City, where it ought to be. These new fortifications, like a continuous line of castles, fictitious though they be, would look well, and could be all finished and inhabited in twenty years or less, and in process of time age would give them that venerable appearance of antiquity which is so delightfully romantic.

All the spare ground enclosed within these walls not required for building upon, nor marked out for streets, squares and market-places, should be

turned into apple and pear orchards. I particularly recommend these two fruits from the fineness of those I saw in the gardens at York: the pears were as sweet as sugar, and the Ribston pippin is the finest apple in the world, and there are not two more venerable trees in any earthly Eden than the apple and pear, consequently they would be very befitting an ancient city.

I consider it absolutely indispensable to the improvement of the City, the purification of its atmosphere, and future preservation from filth and offensive effluvia, that all the poorer inhabitants be compelled to reside in *wide* streets, and be forced to quit those thousands of nasty courts and alleys in which they burrow and seclude themselves: there should therefore be several new wide streets and spacious open squares formed within the new fortifications, and the owners of the property in the dirty lanes and alleys should be bought out of those wretched places, the people compelled to quit them, by pulling them down, which would also in many instances be a great good to better houses in their vicinity, by affording cleared spots of ground to add to their back-courts, which they might turn into beautiful shrubberies.

No houses or other buildings should be suffered to be built in the style of modern architecture, nor in the Italian or Grecian style; but every edifice should be gothic, to correspond with the Minster and other ancient buildings; the gothic arch for doors, stone mullions for windows, and gable-ends of houses, should prevail in every street: the private houses in the new squares alone, might be

modern. Stone for the fronts of houses should always be used in preference to brick, whenever possible; or stucco and cement, as a substitute for stone.

Every street in the City ought to be widened, with the exception of Parliament-street; and several of the present pitiful streets might be swept away with advantage to the general thoroughfare of the town.

All the buildings along both banks of the River Ouse, right through the City, should be cleared away, and the river itself should be widened from the Ouse-bridge to Wellington-row; and a wide street, or promenade, or drive, should be made along both the river-banks, quite through the City, say from beyond St. George's-close to the proposed new fortification-wall beyond the swimming-baths of the Manor-shore, on one side, and the same distance on the opposite bank: this street would only have houses on one side of it, the fronts of the houses facing the river at a distance of twenty-six yards from the river; and a low battlemented wall, say four feet high, along the edge of the latter for the safety of foot-passengers.

There are about twenty vessels that come up to York and lie in the Ouse, to the great disfigurement of this pretty river: they might be all moored in a small basin, which should be dug on purpose in some low piece of ground; but nothing but gondolas, yachts, and pleasure-boats should be seen or suffered on the bosom of the Ouse within the City. It is a far prettier stream than any canal in the famed City of Venice, and why should it be

degraded with a parcel of dung-barges and coal-boats?

While at York, I enquired whether there were any warm or tepid baths, or vapour and fumigating baths, and to my great astonishment was told there was nothing of the kind in that ancient City! —so then, whoever visits York, must make up his mind to forego the usual refreshing ablutions after his journey, and quit the City as soon as he can to get a tepid bath elsewhere that he cannot have there. In the East, a bath is always necessary after a journey, and it is equally a useful luxury in England.

There should be a stand in Parliament-street for hackney-coaches, flies, cabriolets, and sedan-chairs.

A general cemetery should be formed in Bishop-fields, eighteen acres in extent.

A bridge should be built over the Ouse, to the West of the swimming-baths of the Manor-shore, and another bridge still further to the West or North-west of that, (close to the new line of defensive-wall.)

It is much to be regretted that the theatre was built in the vicinity of the Cathedral, a most improper place, besides being hid up in a nook or corner of the town. It ought to have been built in Sampson-square, and I hope it will yet, and of a little larger size. The present theatre might be turned into a concert-room for sacred music, or it should be pulled down; the latter alternative I shall recommend when I detail my plans for improving the approaches to the Minster. A play-

house ought not to be allowed near the Cathedral, nor a Roman-Catholic Meeting-house.

I have the same fault to find with the custom of holding a market in Parliament-street that I have with markets in the streets of other towns; they are a cursed nuisance; the people block up the foot-pavements, and the sheds and crockery-ware spread out upon the ground in the street, make it dangerous for horses and carriages to pass. Are there no empty or vacant plots of ground in all the City where one or more covered market-places could be built? If there are not, let the City be enlarged North-east, North, and North-west. Sampson-square is also spoilt once every week, by the erection of a parcel of black-looking booths for a market. I advise the Yorkites to take a trip to Liverpool, and learn a lesson how to build capacious covered markets.

Nothing could exceed the disappointment I felt the first time I saw York Castle, about which I had read and heard so much, and the very name of which is in every body's mouth all over Yorkshire. Instead of seeing towers upon towers, bastions flanking rough weather-beaten walls pierced with loop-holes, projecting turrets and watch-towers, a ditch and draw-bridge, a commanding situation, and an esplanade of open ground entirely round it, affording a good view of this celebrated stronghold, a stranger comes *suddenly* upon a high dead wall as smooth as glass, like some modern building plastered over with cement, surmounted with church-like battlements, strange unheard-of buttresses, and an appearance at the top which at once shows the sham empty attempt

to make it look like a castle! and the greater part of this celebrated castle is either entirely blocked up out of public view, or buried in a dull narrow winding street!

To make this ancient Castle a real ornament to the City, all the houses and buildings around it should be cleared away, a glacis or grass-plat, one hundred yards in width, should be carried entirely round the new walls, and the latter should have three or four additional towers (square ones), to project as much as the gateway-towers; a narrow ditch should also encircle the whole pile, and a small bridge made opposite the entrance gate; fish should be kept in the ditch to keep the water sweet. What ill-judged parsimony and bad taste possessed the minds of the citizens to go and alter the Castle as it is?—What could induce them to fill up the venerable ditch?—(What is a castle without a ditch?)—and to remove first one ancient relic and then another, till the venerable building is no more like a castle than it is like a hogshead of beer. What prospect had they of gratifying a stranger's curiosity in building those smooth even walls, without so much as a sham loop-hole to relieve their deadness, and, with the exception of the two towers of the entrance gate, might fairly be mistaken for the lofty walls of the London Docks. I had been plagued by my friends, for several years, to go to York, on purpose to see this famous Castle, but I am now almost sorry I have seen it, for the pleasures of imagination have given place to the disappointment of reality: it may be a very good prison, but unless the improvements here recommended be effected, call it no longer a Castle, for it is not worthy of the name.

Suppose a stranger were to ask me, in what part of the City of York is the principal square situated? I should say there was no such locality as a square, unless that corner-hole called St. Helen's is one, or that market-place called Sampson-square, which is much more like a boy's playground at some great school than a square.

How thoughtless it was, to make arched footways on each side the ancient gates of the City, the Bars; how much better it would have been (as these relics were to be preserved) to have made a carriage-way on either side, leaving these ancient gateways in the middle, like triumphal arches, as the Parisians have done with the gates St. Denis and St. Martin at Paris; but the good citizens of the second metropolis of England have not quite so much good taste in these matters as our neighbours across the water.

And, pray, what is the reason that there is no University at York? Methinks its situation is not only very centrical for all the Northern counties, but its surrounding topography is interesting and beautiful, and well suited for meditation and study, quite as much so as Oxford or Cambridge. Two or three colleges might be built in the proposed new part of York, and be formed into a University for the youth of our increasing population, who would, in time, be the certain means of benefiting the City by the increase of visitors, the increase of trade, and by giving a fresh stimulus to the population, and liveliness to the dull town: and I do not hesitate to say, that there is not in all England, a more fitting place for a University than York.

All the noblemen and gentlemen of Yorkshire

should form themselves into a society for the improving, enlarging, rebuilding, embellishing, beautifying, and enriching of this neglected old City, with the resolution of making it the polite capital of the North of England, and with the determination of each having a town-residence in it, and residing in it several months in every year.

There ought to be no factories or mills in or near this City, but it should be entirely a seat of learning, a cradle of the church, a military capital, a seat of justice, a school for the polite arts, especially painting, a second London for fashion, wealth, and good company, and an irresistible spot of attraction to all travellers whether in winter or summer. I saw one factory there: it ought to be swept away, and no more lofty chimneys, vomiting clouds of black smoke, be allowed within twenty miles of the City.

We will now consider the improvements required about the Cathedral, "the glory of the kingdom" as it has been truly called; for even if a stranger has previously visited other cathedrals, every edifice he has seen will seem to shrink into insignificance when compared with this.

The central tower of the Minster should be raised one story higher, so as to afford space above the windows for a row of *small* windows; and a spire should be built on the top of the said tower. The vestries and offices which are still permitted to disfigure the building, near the porch on the south side of the Minster, ought to be removed.

The extinguisher-kind of roof over the chapter-house should be altered into a light *white* spire,

supported upon eight open-arched, slender buttresses, resting on the top of the eight-sided wall, forming a hollow octagonal light gothic spire, more in keeping with the architecture of the rest of the elaborate pile.

Many monumental tablets were destroyed by the late fires in the Minster, and especially grave-stones; and the debris have been removed and replaced with plain stones. I inquired for a small monument to the memory of two clergymen (of a date prior to 1600), but it could not be found, and as I knew that such a tablet or stone had been there, a friend having seen it, it is of course destroyed, and other monuments are likely to share the same fate. This fact suggests the utility of collecting the *Inscriptions* of all the grave-stones and monuments in the Cathedral, especially of the broken ones that are taken up to be cast away, and of having them printed in a book, in alphabetical order, a copy of which should be kept in the vestry, and the rest of the edition might be bound up with the "Guide to York," for as to examining the registers of deaths and burials in the vestry-books, it is a useless labour, as I found it; the writing is worn out and the dates do not go far enough back; and, besides, a mere entry of a name and burial does not afford that satisfactory history of a family that a full *Inscription* does.

Musical festivals should be forbidden being held or celebrated in York Cathedral or any other place of worship: it is a desecration of a holy temple dedicated to a very jealous Being, who has already levied the heavy fine of 100,000*l.* for the repairs of the fire; and He may be again pro-

voked (if any more pretended religious musical entertainments be repeated) to suffer the edifice to be again destroyed. Beware!—Take warning! —" My house shall be called a house of prayer."

It is very wrong to suffer tombs and tomb-stones to be erected on the floor of the Cathedral, especially in the aisles of the choir: the rule should be, that no tombs or grave-stones be allowed on the floor, but such as are intended to be on the same level and to form part of the floor: it is a great nuisance to have the aisles and other floors of a church obstructed by tombs standing here and there, in all directions as if it were a church-yard, some of them three, four, and five feet high: if such a custom prevailed extensively, the progress of people walking about inside a church would be constantly hindered, and many monuments on the walls would be quite blocked up, so that no one could get near enough to see or read the inscriptions: so long as people contented themselves with fixing monuments and tablets on the walls it was all very well, but no influence or dignity should be allowed to prevail so far as to permit the relatives of a deceased person to build a tomb-stone on the floor: there are several tombs on the floor of the aisles of the choir in York Minster, and as they oblige visitors to make a detour round them (for they are sadly in the way), they ought to be removed and be erected outside the church.

It is to be hoped that an Act of Parliament will soon be passed, that will put a stop for ever to the custom of burying people inside churches and other places of worship; and that a Pantheon will be erected for the reception of monuments and

statues to the honourable memory of illustrious individuals.

The situation of York Minster, as well as the approaches to it, are extremely disadvantageous and unfavourable to an examination of the beauties of the edifice. It might have been expected, that instead of a stranger having to inquire his way to this "august temple," as is now the case, the increased width of the streets and the grandeur of the buildings, would have pointed the road to the most cursory observer. Instead of this, the streets leading to it are narrow; the houses, in general, mean; and these ill-looking gloomy buildings are crowded so near on almost every side, that the fine effect of the noble edifice is entirely lost. This circumstance has long been seen and deplored by the numerous friends and admirers of this the noblest Minster in the kingdom; and a few of the hindrances, to a general view of the building, have been removed through the public spirit and liberality of the Dean and Chapter. The new Deanery and Residentiary lately erected, and the gardens and shrubbery so tastefully laid out on the north side of the Minster, are well worth the attention of a stranger, the grounds being thrown open to the public. A very natural question occurs in the contemplation of this subject: the Dean and Chapter, it appears, are very willing to make every possible improvement around the Minster, and have already expended large sums on this work, but why do not the wealthy classes come forward in a liberal spirit, and assist in the accomplishment of such desirable improvements? Why are the Dean and Chapter expected to sacrifice their emoluments or

private fortunes in the execution of works for the public pleasure? What is the reason that the wealthy public stand aloof—are so backward, so stingy, so shy of lending their assistance in liberal subscriptions for the completion of public improvements, objects in which every member of society must share gratification and pleasure? We will now state, in continuation of our plan, the improvements required around the Cathedral.

In the first place, the little church of St. Michael-le-Belfry should be carefully pulled down, every stone being first numbered, and with the materials a handsome large church should be built in one of the quarters of my proposed new part of the City, which I shall describe presently. And secondly, all the houses which surround and crowd upon the Minster-yard should be removed: these consist of some piles of buildings, extending from the Residentiary (the latter not to be touched), including Precentor's-court, part of Little Blake-street, all Peter-gate, and part of Stone-gate, as far as Grape-lane, and all the houses from thence which abut on the Minster-yard, in a circle round to the back of the Deanery (the latter building not to be touched). The whole of this space of ground to the distance of one hundred yards from the Minster in every direction being cleared, should be enclosed with a low wall and iron railing, like that of St. Paul's Churchyard, London, and then planted with grass and shrubbery. The inhabitants of the houses that are to be pulled down, should be allowed the first choice of the houses in the new grand streets, which of course must be

built before they are removed, and they would lose nothing by the exchange.

We will now proceed to trace the direction of the new grand streets. The first naturally relates to the Western grand entrance of the Cathedral, opposite to which and perpendicular to it, a handsome street should be opened, thirty yards wide, and carried through every opposing obstacle or building, down to the River Ouse, in a perfectly straight line. This street should consist entirely of shops on both sides. It would pass through part of the Manor-house, along the back of the Yorkshire Museum, (which might then have an additional front to the new street,) and sweep away part of the ruins of St. Mary's Abbey, which cannot be helped; but the materials of those ruins might be built into and preserved in some other ancient-looking edifice.

The second grand street naturally springs from the other entrance of the Minster (the South), and should be opened exactly opposite that door, and be carried in a perpendicular straight line to Sampson-square. The street should be twenty-six yards wide, with shops on both sides.

Wherever any old little church stood in the way of the new streets, they should be pulled down, and their materials carefully applied to the building of other edifices, all of the ancient gothic order. There are twenty-four churches in this little City, which is just twelve more than it requires at present.

Walmgate-street should be widened, made straight and of an even width, and be carried on till it joined the South end of Parliament-street,

with which it is almost in a line already: this would then be a very tolerable street, and a great improvement.

A new straight street should be built from St. George's Bar to the South end of Parliament-street, with a new bridge over the River Foss in its line. This new street would form one line with Parliament-street, and both together a magnificent street, if of the same noble width throughout.

The whole of Micklegate-street should be widened and straightened, from the Bar to the Ouse Bridge; and another straight street should be carried from the latter to the Great North of England Railway Station.

A very fine street might be made from the Ouse Bridge straight to Laythorp Postern, with very little deviation, and few alterations of the present streets that form the nearest line between those two points; they would merely require widening, —namely, Little Ouse-gate, High Ouse-gate, Pavement-street, and St. Saviour's-gate-street, and carrying it through two blocks of houses to Jewbury. A fine wide street to the extremities of this part of the City would very much improve the neighbourhood.

A noble wide street should be carried from the Ouse Bridge straight to the front of the two round towers of the entrance-gate of the Castle. The vista of the two towers would have a grand appearance, which at present is entirely lost and hidden in Tower-street. Tower-street and all the buildings round the Castle should be abolished, as I have previously suggested.

A promenade should be thrown open to the public along the opposite shore of the River Foss, which surrounds the North-east side of the Castle, and extend from the bridge (of the road to Selby) to the proposed new bridge and street that is to connect St. George's Bar with the South end of Parliament-street.

The shrubbery and grounds of the Yorkshire Museum should extend down to the proposed road along the river-bank, and take in the whole width from the present Swimming Baths to the Water-Works; and no houses or other buildings should be suffered to obstruct the view of the river from the said shrubbery and grounds.

The Water-Works should be removed, and be built a mile up the stream above the town, where pure water can be had, and at a higher level.

Baths and bathing establishments should be built above the town, and not below the town; for in the latter case the water cannot be pure.

The River Foss should be deepened to that of the Ouse, as far as the Canal and Union Gas-works, and the lock and sluice should be removed to some spot higher up the stream, and then a fine basin might be made of that fork of land between the Foss and the Canal, for the shipping of the town, instead of suffering them to block up the beautiful stream of the Ouse. As for the Foss, it is not worth looking at; but it would serve thus as a kind of harbour; and a Custom-house might be erected in that locality, and quays and jetties for the keels to unload at.

Having disposed of the improvements of the old part of the City, we now come to the consideration

of the proposed new quarters, to the North of the Cathedral, which in fact will extend round from North-east to North-west. And in the first place,

Bootham-street and road should be made of the handsome width of thirty yards its whole length, which will extend to the new fortification-wall at Clifton.

A circumferential street should be carried round the City within the new fortification-walls; and then seven principal streets, from twenty-six yards to thirty yards wide each, should diverge from the Minster, like rays, as a common centre, and join the circumferential street. Bootham-road to Clifton would be one of these principal streets.

Eight smaller streets, twenty yards wide each, should be built exactly between and parallel to the forementioned seven grand streets, and the two new streets from the West end and East end of the Minster. The eight smaller streets being only half the length of the grand streets, and commencing from the circumferential street.

Short streets should connect all the streets together in a vandyke circle (at about their middle) all round the Minster, to save distance and afford facility of communication throughout this new part of the City.

One of the grand streets in this new quarter should consist of the frontages of three large colleges, in the gothic style (with spacious gardens behind them); also a number of handsome mansions for the masters, and respectable houses suitable for private lodgings for students living outside the colleges.

The other six grand streets in the new quarter

should exhibit a pleasing variety of squares, crescents, circles, ovals, hexagons, octagons, triangles, &c., with shrubbery, grass, fountains, and statues; —the squares to consist of private houses, and the other parts of the streets to consist of shops.

A Mansion-house for the Lord Mayor, and some other public buildings, especially a Picture Gallery, and a Music Hall larger than that at Birmingham, should occupy conspicuous situations in the squares, and these latter should not be small confined spaces like Sampson-square, but they should be modelled after the largest squares in London. The old Mansion-house should be appropriated to some other purpose.

All the labouring classes of York ought to apprentice their children to the trades of carpenters, builders, and masons, and then when they had learnt their craft in assisting to raise the numerous buildings required in the City, they could carry their labour and skill to other places where improvements were going on, and especially to some of Britain's best colonies.

York should be a city of carvers in wood, model-makers (such as small models of public buildings,) antiquarian shops, ancient *book* sellers, picture shops for oil paintings, print and map shops, workers in ivory, gold, and jewellery; coiners of medals and imitators of ancient coins; and any process or trade that does not require a great manufactory or create much smoke.

A stop should be put to the building of a parcel of random streets and lanes outside the City-walls all round; and what are already built, together with every detached house and cottage or other

building, should be pulled down and cleared away, save and except such part of them as could be enclosed within the proposed new walls; and people should be compelled to build within the walls and according to approved plans previously printed on paper and made public in anticipation of centuries to come: it utterly spoils the view of a city as one approaches it, to see it environed on every side by low, dirty, poor and mean habitations and petty streets. No *streets* or *lanes* ought to be suffered to be built within five miles of York on any side.

A Park should be formed like a belt, half a mile wide, of open grass land, entirely round the City, cleared of large trees which might obstruct the view, but planted with clusters of small shrubby trees, the outer circumference of which should be surrounded with ornamental villas and detached cottages. No house or building of any kind should be suffered to be erected within the half-mile circumference, not near the outside of the fortification-walls, under a penalty of 5,000*l.* and the building to be pulled down.

A penalty of 100*l.* should be inflicted on any person who builds a room of a less size than fifteen feet square in any house or dwelling-place; and if there be more than one such room in any house, an additional penalty of 50*l.* for every such other under-sized room, and the room or rooms to be pulled down or enlarged.

Cavalry and Infantry Barracks, with stables for twelve hundred horses (or two cavalry regiments) should occupy a large space within the new quarter, but close to some gateway or "bar," which is

the fittest locality for a garrison. And instead of keeping troops at Doncaster, York should be made the grand dêpot and Head Quarters of the Northern Division of the army, to consist of ten regiments, horse and foot, artillery and sappers, in due proportion, and the garrisons of Hull and Liverpool should be furnished from thence, as well as detachments to Manchester, Leeds, and some other towns requiring protection from the enemies of peace. How absurd it is, to make Doncaster a military station, for no other reason but because the Romans did!

Great exertions have been lately made at York to revive the amusement of horse-racing!—Oh, that I had the tongue of eloquence that could dissuade the noblemen and gentlemen from pursuing a recreation that causes so much sin and misery! Cannot the breed of horses be improved and kept up by some other means than by races? I should think it could. If noblemen who love these sports would but consider the extensive mischief they bring upon the thousands of poor, who are attracted to the races, who quit their daily quiet labours and spend three or four days in idleness, drinking, cursing, and immorality of every kind, unsettling their minds and bringing them in contact with crowds of pick-pockets and bad characters of every degree; if the numbers of respectable families who are injured or ruined by betting on the horses could be known, the remorse, anguish, the "hell-of-mind" felt by men who have brought themselves and families from affluence and happiness to debt and wretchedness, I think that conscience would whisper to them that it is not right,

and "what is not right must be wrong." I knew a family of the highest respectability, whose head and chief kept a number of racers: his expenses and losses at races were at length the secret means of forcing him into the gazette as a bankrupt, and himself and his amiable and lovely wife and young children were reduced to poverty, from which they never rose again! Races are cruel and demoralizing: archery, on the contrary, is a beautiful and ennobling amusement.

With the foregoing suggested improvements, York would be the court-capital of the North of England, a halfway capital between London and Edinburgh, and a City that no one would omit visiting in their progress North or South, East or West. The nobility and gentry of the North of England and especially of the county of Yorkshire, should lay aside all family quarrels, party spirit, and political differences, and come forward with one united heart and mind, to the great object of raising York to a first-class city, and employ the first architects of the age. There is no lack of wealth, talent, or human beings, and these three elements together, with a persevering and praiseworthy enthusiasm in the cause, would soon make York a second Munich, a Florence, or a second Rome.*

* To keep up the character of an ancient gothic city, York should have several colonnaded streets, that is, piazzas along the two foot-pavements with gothic pointed arches, and small skylights in the roof just over the shop windows.

I have seen one or two streets colonnaded their whole length on both sides, in an ancient city in ruins, (the Hindoo city of Bisnaghur.) The houses and pillars were built with stone, each pillar a single stone, and still perfect, although deserted several

LEEDS.

THE great branches of our national industry, while they are instrumental in producing and diffusing wealth, appear at first sight almost to involve the moral and physical degradation of the numerous masses of our working population, who are immediately engaged therein; and although a closer examination will show that this is by no means the case, we shall find that this class is undoubtedly suffering from evils of no common magnitude. The chief palliation of the guilt of neglect and delay in providing a remedy for the existing evils, is to be found in the rapidity with which they sprung forth. They had become of gigantic stature before men were aware of their existence, and then it seemed to be hopeless to contend with them. The changes which have taken place in the state of society in England during the present century, were so different from the ordinary circumstances under which great social revolutions take place, that men's attention was not sufficiently directed to enquire into the new wants to which they gave birth. Numbers were drawn to the great seats of manufacturing industry from the surrounding rural districts, and from more distant quarters, as the demand for "hands" became

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hundred years. They were fancifully carved and painted, and the view was picturesque, romantic and enchanting.

But letting alone gothic piazzas and Hindoo piazzas, only imagine a fine wide and long street in an English town colonnaded on both sides its whole length, with round fluted iron pillars like the Quadrant at London; can there be any earthly architectural scene more ravishing, splendid, grand, and m[illegible]nificent?

more urgent; rows of cottages were hastily erected for the accommodation of the immigrants, and to provide for the demands of a rapidly increasing population. In twenty or thirty years the population of the towns which became the scene of these changes was doubled, or perhaps trebled; but as for their physical, moral, and intellectual improvement, the multitude of human beings thus suddenly congregated on a given spot were in a state of as much destitution as are some hundreds of labourers employed for a few months on public works, and who are temporarily occupying huts erected close to the scene of their labours. One great want, therefore, of the large towns of modern growth is an improved municipal organization directed to such objects of local interest as can be successfully accomplished by local means. No single remedy can be adapted to evils which ramify into so many branches; and though no one can doubt the advantages which have been derived from Sunday-schools, Savings' Banks, Mechanics' Institutes, and Reading-rooms, yet the inefficiency of these alone is now forced upon our conviction, and we hope we are not mistaken in assuming that the condition of the labouring population, especially in the large towns, will soon be treated as a *whole*, and that a series of practical measures will be devised for their benefit.

As an instance of the various means by which the great object to be kept in view may be promoted, we regard with much satisfaction the Act of Parliament for enforcing a better system of drainage in large towns. It is a step in the right direction, and is avowedly taken with the object

of directing attention to the condition of the working classes of the town population, so that it will naturally be followed by other plans of improvement, such as public walks, swimming tanks, cemeteries, &c. A glance at one branch of the evils which the new law is designed to remedy, will at once prove its value and necessity. Our facts are taken from the Report of a Statistical Committee of the Leeds Town Council upon the condition of that town and its inhabitants, which contains information respecting the condition of the surface and subways of the streets; and we are assured that the state of things therein described will find a parallel in every one of our large towns of similar size. In Leeds there are extensive and populous districts without any sewers or means of drainage, and filth of every kind accumulates in masses and lodges in hollows on the surface, until dissipated by the wind and sun. There were, in 1839, three streets in Leeds containing one hundred dwellings, and a population of 452 persons, for whose accommodation there were but two out-offices, neither of which was fit for use; and other parts of the town were in scarcely a better condition. Some streets resemble a field which has been cut up by loaded vehicles in wet weather, and the inhabitants vainly attempt to repair them with ashes, or other refuse. In whole rows of cellar dwellings, the walls never cease to drip with moisture; and in some habitations of this class the inhabitants have been awakened in the night and found their beds literally floating. In other cases, where there are sewers, the want of arrangement amongst proprietors renders them

of little use. They become engorged, and pour a flood of fetid matter into cellars and dwelling rooms. Malaria then affects the inhabitants, and its influence is shown by the accelerated fatality of disease in the district. In a case of this kind at Leeds, it appeared that while in other parts of the town there were only two deaths to three births! the proportion in the flooded district was three deaths to two births. Dr. Southwood Smith has stated of the metropolis, that by taking a map of the sewers, and tracing the course of fever, it would be found to run in a directly inverse ratio to the course of the sewers;—where there were sewers, there no fever would be found.

There are many other evils in the physical state of towns besides those arising from deficient drainage, but the reader may be spared for the present the painful facts which show that large portions of our industrious fellow countrymen are habitually living amidst circumstances which degrade and brutalize the character, and all but extinguish the moral sense. It is more pleasing to notice the fact that attention is awakened to these evils, and the conviction is gaining ground that they must be removed ere the work of moral, religious, and intellectual improvement can commence upon a just foundation. How, for example, is it possible to give to individuals already morally degraded, a sense, or a taste for domestic comforts while they continue destitute of a home worthy of the name?—Or can it be surprising that the damp and cheerless cellar, without a single domestic convenience, should exercise a less powerful influence and attraction than the gin-shop or the beer shop? Those who have had

opportunities of learning the condition of the working classes, have not failed to notice that when a mechanic removes from a two-and-sixpenny cottage to a three-and-sixpenny cottage, a corresponding moral improvement has been visible in his conduct and deportment, and the man who falls from a state of comfort into the hopeless degradation of a miserable cellar-dwelling, sinks too often into a lower moral state as his physical condition becomes depressed and unfavourable. Mr. Ashworth, the great manufacturer of Bolton, is so strongly impressed with the influence of comfortable habitations for the working classes upon their moral character, that every successive range of cottages erected by him for the last twenty years has been rendered more expensive, and has been more completely furnished with conveniencies than the preceding lot; and the best cottages are at once the most expensive and the most sought after by his own work people. In cottages of this class new desires are experienced; an effort is made to purchase appropriate furniture, to obtain which, orderly and sober habits are necessary; and cottages of this description encourage such habits, for here the artizan can spend his evenings in the enjoyment of domestic comforts, and need not resort for excitement or recreation to the beer shop.

The Act of Parliament before alluded to, is to give the industrious classes a greater share of public comfort and convenience. It will protect them from the avarice and extortion of the owners of small tenements; for in many instances they, and not the tenants, are to blame for the scandalous

violations of comfort and decency, which are inevitable without this protection. While the enquiry at Leeds was proceeding, a deputation of women waited upon the Committee to beg an immediate remedy for a nuisance in their neighbourhood; but owing to the indefinite meaning of the term "nuisance" in point of law, this object could not be accomplished without great trouble and expense; and these impediments have in fact been the protection of many a nuisance, while the new law will go to the source of the evil. It may also be regarded as an encouragement to owners of tenements who are disposed to consult the comfort and convenience of their tenants. At Leeds, "in many instances, when the property of a street is in many hands, one-half of them or more, originally completed their respective parts, as regards paving and sewering, but the cupidity, obstinacy, or poverty, or all combined, of the others, or even of a single one, has prevented the improvement of the whole."

Lastly, the new law is one of justice to the small rate-payers. In the Leeds Report it is stated that "in a great measure the cottages are rated as a part, and for the benefit of the whole community; but are mulcted of that proportion which ought to carry clean pavement to their own doors."*

I shall also just notice the pretty condition of the river Aire, which runs through Leeds. Instead of being an ornament to the town, and a minister of pleasures to its citizens, by boating, swimming, and fishing, its banks are crowded and

* The Penny Magazine for March, 1841.

shut up with buildings, and its waters are like a reservoir of poison, carefully kept for the purpose of breeding a pestilence in the town. In that part of the river, extending from Armley mills to the King's mills, it is charged with the drainage and contents of about two hundred water-closets, cess-pools, and privies, a great number of common drains, the drainings from dung-hills, the infirmary, (dead leeches, poultices for patients, &c.,) slaughter-houses, chemical soap, gas, drug, dye-houses, and manufactures, spent blue and black dye, pig-manure, old urine wash, with all sorts of dead animal and vegetable substances, and now and then a decomposed human body; forming an annual mass of filth equal to thirty millions of gallons! This was, until lately, the delicious nectar, the delectable water that went to make tea, to be carried to the lips of the beautiful young ladies of Leeds, (and they are the loveliest girls in the world) and to cook the victuals of the inhabitants. But, although the town is now furnished with purer water for every purpose, yet the condition of the river remains the same, evolving a diurnal exhalation of disease as regularly as the sun rises in the heavens, and I am afraid it will continue to do so until the better judgment of the wealthy mill-owners prompts them to remove their factories and other buildings further down the river, away from the town. It would be better for the work-people to have to go half a mile out of the town to their work in the mills and factories, than to have the health and cleanliness of the town spoilt by the factories being suffered to be erected in the town. And it is also better for people to

congregate and live together in cities and towns, (away from the manufactories,) as the associating of large numbers of people together, tends to civilization and enlightenment, and breeds friendships and mutual acts of benevolence.

With respect to the filth of a town, which may be used as liquid manure, we might take a lesson from the Parisians. A new contract was recently signed at Paris, by which the contractor agreed to give 22,000*l.* per annum for the contents of the cess-pools of that city, which are at present deposited in a place in the suburbs, called Monfaucon; but are about to be conveyed by a new drain five miles further from the city. The manure of such a city in England would be worth five times the amount.*

It appears that something of the kind is about to be effected in Leeds, though on a very small scale, by the proposed new sewerage. In my humble judgment, the sewers and drains are all too small for such a growing and increasing town as

* The following is a picture of Leeds, from a Leeds newspaper:— "The pollutions of the atmosphere of the town by smoke, by the steam of dye-houses, by the stifling fumes of many noxious processes, and by the effluvia of whole districts of undrained streets, is perhaps unequalled, certainly not surpassed by any other town in England: the evil does not end in merely giving us a very black and unwholesome air to breathe, but it seems as if the murky atmosphere were considered an effectual veil to hide all sorts of slovenliness in the condition of the streets, particularly in those which are yet incomplete; and even in some of the principal thoroughfares the state of the pavement is disgraceful. But while public functionaries plume themselves in saving large sums of money, (for the purpose of attracting or securing popularity for electioneering purposes,) we may hope in vain for any extensive improvements in this dirty and stinking town."

Leeds; and perhaps the next generation may require them all to be enlarged, at an enormous expense, and the trouble and dirt of digging and building to be all gone over again.

The following brief extracts from the Report of Captain Vetch, of the Royal Engineers, on the sewerage of Leeds, may be usefully inserted here:—

"The primary and most important evils to be removed, are the discharges of filth into the river, by substituting main sewers in some degree parallel to the course of the river. There is no room for half measures. It is in vain to suppose that the condition of the town can ever be materially improved, till the river and the brooks are saved from their present pollution; but carrying to the full extent the principles proposed, there is no reason whatever why this town should not become as clean and wholesome as any manufacturing town in England; it has many natural advantages, which can be turned to good account; but all the interior and surface drainage, paving, and flagging, and other secondary means of improvement, will be of minor importance compared to the great benefit resulting from the construction of main sewers to serve in place of the river."

It is proposed to construct four principal sewers as follows:—

1. North Main Sewer, along the north side of the river (from the outlet in Thorp Pool to the junction with Addle Brook.)

2. Addle Brook Sewer, from the junction in Marsh-lane to the head of the drain near the Oil Mill at Sheepscar.

3. West Sewer, from the junction with Addle Brook to the junction of the Wellington and Kirkstall roads, near Wellington Bridge.

4. South Main Sewer, along the south side of the river, (from Haigh Park to Leeds Bridge, including the suburbs of Hunslet and Holbeck, with principal branch sewers.)

Estimate of North Main Sewer.

yds. links.				
935.0	yards of open cut, 4 yards wide by 2 deep, from outlet in Thorp Pool towards Knostrop Hall, at 3*s.* 4*d.* per lineal yard .	£249	6	8
1458.6	yards of covered drain, of walled stone, including excavation, from open cut to tunnel in East-street, at 2*l.* 5*s.* per lineal yard	3281	17	0
330.0	yards of covered drain, inserted by means of tunneling, in East-street, at 4*l.* 5*s.* per lineal yard	1402	10	0
279.4	yards of covered drain, to the point of junction of the Addle Brook and West drains, at 2*l.* 5*s.* per lineal yard . .	628	12	6
		£5562	6	2
	Contingencies, one-tenth .	556	4	7
		£6118	10	9

Estimate of Addle Brook Sewer.

114.40	yards, from junction of main trunk to Marsh-lane;			
1198.56	yards, from Marsh-lane to head of the drain near the Oil Mill.			
1312.96	yards of covered drain, 8 feet by 8, at 2*l.* 5*s.* per lineal yard	£2953	3	2
	Iron pipes along course of Old Beck, and sundry work there . . .	1465	4	0
		4418	7	2
	Contingencies, one-tenth .	441	16	8
		£4860	3	10

Estimate of West Sewer.

yds. lks.				
438.46	yards of covered drain, 8 feet by 4 at one end, and 6 feet by 4 at the other end, at 1*l.* 12*s.* 6*d.* per lineal yard . .	£712	9	11
154.00	yards of covered drain, inserted by tunneling in the Calls, 6 feet by 4, at 2*l.* 0*s.* 6*d.* per lineal yard	311	17	0
528.8	yards of covered drain, from the Calls to Bishopgate-street, 6 feet by 4, at 1*l.* 1*s.* per lineal yard . . .	552	1	9
330.0	yards of covered drain, inserted by tunneling in Wellington-street, 6 feet by 4, at 2*l.* 0*s.* 6*d.* per lineal yard . .	668	5	0
451.0	yards of covered drain in Wellington-street, 6 feet by 4 at one end, and 4 feet by 3 at the other, at 18*s.* 6*d.* per lineal yard .	416	13	0
523.6	yards of covered drain in Wellington-street, 4 feet by 3, at 16*s.* per lineal yard .	419	17	7
		3080	4	3
	Contingencies, one-tenth .	398	8	5
		£4382	12	5

Estimate of South Main Sewer.

1760.0	yards of open cut drain through Haigh Park, 3 yards wide by 2 deep, at 4*s.* per lineal yard	352	0	0
2235.2	yards of covered drain, 6 feet by 6, from Thwaite's Gate to Albert-street .	3632	4	0
		3984	4	0
	Contingencies, one-tenth .	398	8	5
		£4382	12	5

Estimate of the Principal Branch Sewers on South side of the River.

yds. lks.				
707.3	yards of 1st class sewer from Albert-street to Leeds Old Bridge, at 15*s.* per lineal yard	£530	9	6
1854.6	yards of 1st class sewer, Sweet-street line, at 15*s.* per lineal yard	1390	19	0
1305.7	yards of 1st class sewer, Little Holbeck line, at 15*s.* per lineal yard	979	5	6
847.0	yards of 1st class sewer, Great Holbeck line, at 15*s.* per lineal yard	635	5	0
		3535	19	0
	Contingencies, one-tenth	353	11	11
		£3889	10	11

Summary of Estimates.

North Main Sewer	£6118	10	9
Addle Brook Sewer	4860	3	0
West Main Sewer	3388	4	8
South Main Sewer	4382	12	5
Total of Main Sewers	18749	10	10
Principal *Branch* Sewers, South side of River	3889	10	11
	£22,639	1	9

Cost of Tanks or Catch-pits for manure, may be estimated at £750, for each side of the river.

From the researches into agricultural chemistry, and from the usages of other countries, the value of the manure, estimated according to the population, may reach to 10,000*l.* a-year, in the course of ten years; such a circumstance alone, would demonstrate the bad policy of sending so much fertilizing matter to the river, where it is not only

lost, but actually becomes the source of many diseases and disagreeables.

The improvements would probably require 30,000*l.*, and a rate of only one penny in the pound would more than suffice to pay the interest of this sum, until the value of the manure came to redeem the principal.

This document is dated 31st December, 1842.

As soon as these improvements are completed, and the river rendered sweet, the inhabitants should have it dug deeper all through, from one side of the town to the other, abolish all the buildings on its banks, on both sides, throw the banks open to the public, by forming river-streets open to the water, plant them with ornamental standard trees, form flights of stone steps down to the water at regular distances, and erect a low balustrade from one flight of steps to the next, and from that to the next flight, and so on all through the town along both margins of the river; and the water being once more habitable for fish, they should be preserved, and they in return would preserve the water clear and sweet, and it would be a delightful lake for rowing and sailing pleasure-boats, and the walks on both sides would be as enchanting and as much resorted to as such places usually are in some of the southern foreign cities. Depend upon it, neither the shopkeeper nor the artizan, any more than the wealthy merchant or man out of business, would ever regret the accomplishment of such striking and beautiful alterations in this, at present, most disagreeable, ugly, and filthy town.

When I visited Leeds, I must confess I was astonished at the filthiness of the town, and the glaring apathy and neglect that was observable in the building-schemes that were carrying on, especially in the North and West quarters, where upwards of two dozen little new streets, or attempts at new streets, are run up in all manner of directions, without any regular plan or imaginable motive but to create confusion or a labyrinth, amidst holes and hillocks, ponds and puddles, and mud a yard deep.

Many respectable houses in this town have no gardens nor even back courts, nor scarcely a foot of ground attached to them except a little tiny front court enclosed with an iron-railing; and yet great rents were demanded for these suicidal prisons (and they deserve no better name), for whoever takes such houses, must submit to linger out life without one of its principal enjoyments, a spot of shrubbery and fresh air; and to be retired, it should be at the back of the house. The houses in Rockingham-street, Coburg-street, Queen-square, and every other street and square in the town might have had, and ought to have had, back gardens, a morsel larger than their present ones, if they had been built by considerate, liberal-minded and humane men, who remembered they were building habitations for human beings and not cages for beasts. I went to Leeds with the full determination of taking a house and establishing myself there, but I quitted the town in disgust.

The pavement of Leeds is in a most shameful

state throughout; the stones are laid so unequally that they are destructive to carriages and cattle, and cannot be passed over without danger and discomfort to those who are riding or driving; witness Briggate, Commercial-street, Boar-lane, Park-square, Byron-street, Skinner-lane, the Leylands, Mabgate, Little London, Camp-road; and Wellington-lane and Hanover-street at the West end of the town: no one can ride along these smaller streets without actual danger. It is to be hoped that the carriage-ways and foot-ways of all these streets will be set to rights by the Improvement Commissioners, and that they will also put a stop to the nuisance of hanging clothes across them to dry.

On market day, nearly the whole of Briggate, the only wide street in the town, was lined with fruit stalls and sheds for the sale of various articles: this is a most intolerable nuisance, and it is a culpable neglect in the authorities of the town, who have the power of ordering such matters, to let the street and the foot-pavement be thus intruded upon and obstructed by stalls, to the annoyance of foot-passengers, who can scarcely make their way through the crowds of idlers, who stand gaping and staring, or saunter up and down, and care not whose business they mar and hinder by their stupid practices. How much cleaner and healthier Briggate-street might be kept, if there were two or three large square pieces of ground opened somewhere in the town for markets for all kinds of eatables, and stalls for every description of ware. Is Leeds so poor a place that the in-

habitants cannot form a company to build three or four covered market-places for meat, fish, fowl, vegetables, fruit, and fire-wood?

The builders in this town run up their rows of houses and little narrow streets before they ever consider how such streets or houses are to be drained, paved, cess-pooled, supplied with water, or got to from the other streets, except by wading between deep ruts full of water! Why, one would think that common sense would whisper to a landlord or builder the absolute necessity of forming good and substantial drains at some time or other, sooner or later, to carry off accumulated waters, and it could be better done before the houses are run up, and before they are encumbered with inhabitants, rather than let the latter live amidst mud and slush, and wade ankle-deep to their homes for four or five years to come, to the great injury of their health, their beauty, and their comforts.

Such a reckless custom of building should be stopped by the strong arm of an act of parliament to regulate the building of a street, which law should be so worded as to contemplate and provide rules for the building of a single house, the same as if the said single house were the first of an intended street. The avarice and inhumanity of dabblers in bricks and mortar require to be placed under restraint and regulation, as much as anything I know of in the world.

A new principle in laying down the direction of new streets and altering old ones, should be adopted, and be a standing order for ever; for whereas, at present, when an old street is to be

widened, a few houses are thrown back here and there, and no regard is had to making the street straight. Now, in widening a narrow street, the two objects of widening and making the street perfectly straight should invariably go together, and be inseparable; and for this object, lay down an imaginary centre-line from one end of the old street to the other end or intended end, (never mind its cutting through any number of houses,) and call the imaginary line the centre-line of the street, and say the line of foot-pavement on each side shall be thirty feet from the centre, or forty feet from the centre, if it be intended to be a very wide street, and then from time to time, and from one period to another, as the several houses get old and ruinous, they must come down according to law, and be rebuilt on the new line of houses, outside the foot-pavement.

Thus, in about one hundred years, every town in the kingdom would be made convenient, handsome, cleanly, and healthy, merely by the regeneration of their filthy, narrow, crooked, and sickly-looking streets.

Church-lane should be widened, and carried in a direct straight line through the lanes and alleys and blocks of cottages, to a junction with Skinner-lane, and in process of time it would grow into a fine street, and thus bring St. Peter's Church almost to the doors of a population who are now lost in a labyrinth.

North-street and Vicar-lane should be carried straight down to the river Aire, and widened the whole way to at least twenty-six yards in width:

this would then be a noble and useful thoroughfare to that populous part of the town.

Park-row should be carried in a direct straight line to Woodhouse-lane before any buildings are erected on the ground to hinder it; and then, by the removal of two or three buildings join it to Neville-street and it would form united a fine street nearly a mile in length, very useful to the western parts of Leeds.

It would be a great improvement to widen Briggate down to the bridge and from thence to the station of the North Midland Railway. Again, Briggate should be extended and prolonged on to Camp-road in a wide straight street, and then in process of time, every off-set street on the right and left of this great street (Briggate) should be made to open into it. A few more good open squares of genteel private houses should be erected in the eastern parts of the town to improve that neighbourhood, and the streets of the industrious classes be laid with substantial granite pavements and kept a little more tidy and wholesome.

Go round and round again, outside the town of Leeds, and a stranger will look in vain for those extensive plots of garden-ground for the use of the operative classes which he sees outside many other towns, and yet Leeds is situated in the midst of a country so diversified and so well watered, that it might be converted into an earthly paradise, and be surrounded with one blaze of apple trees and other fruits and rose trees and other flowers; and instead of endeavouring to attract the multitude to the Zoological and Botanical Garden by a parcel of expensive wild beasts

and shows, and exhibitions of fireworks, give the people a taste for and the knowledge how, to *cultivate and enjoy gardens of their own*, where they might grow potatoes for their winter supper (for a roast potatoe is a capital supper) and lettuces, onions, and small salad for their summer supper, which they would not eat with less appetite for having walked out of a noisy factory or mill, into a sweet little quiet garden at the edge of the town. All the fields round the town on every side and immediately contiguous to the houses, should be divided into about twenty thousand squares, of a rood each, not divided by walls but by paths, and every citizen should be compelled to hire a rood of ground for a garden or pay a tax for exemption.

The Botanical Garden should be kept up, entirely for scientific purposes, and with a first and second gardener, at forty pounds a-year wages each, would reduce the expense to the subscribers to a mere trifle; for excepting seed and manure there would be no other expense or waste of money. And send the wild beasts to Jericho; there are too many of these devouring animals in England, and it is lamentable to see the quantity of good food they consume, whilst thousands of poor people can scarcely earn their dinner. One Zoological Garden for all England is quite enough, and that ought to be at the metropolis; all others ought to be abolished by law.

And as for the exhibition of fireworks and bands of music, they are amusements only fit for public tea-gardens and taverns, but I regard it as a prostitution of a Botanical Garden to unworthy purposes,

to have such displays there; for if people will not go to the garden for its own sake, it is so much the better for those who love a quiet place of retirement and who go there for air and exercise, and meet with more select visitors in consequence.

There is a nursery-garden of fifty acres in extent not far from Coggeshall in Essex (if not sold and broken up, of which there was said to be some intention) where almost all the trees and plants of the various climates of the world were cultivated and flourishing in health, including a tall cocoa-nut tree in a lofty hot-house. I merely mention the circumstance to shew, what might be done in Botanical Gardens provided they were kept up with spirit and for scientific purposes: and when the great importance of medical botany is considered, it is to be hoped that more attention will be paid to the true uses of Botanical Gardens, and that money be no longer wasted on objects foreign to those uses.

The whole of that piece of ground consisting of fields and building-ground, bounded by Wellington-street on the North, Park-mills on the West, Monk Pits-street on the East, and the river Aire on the South, should be purchased by the corporation and formed into a park, or what it is still better calculated for, into gardens for the industrial classes. It is admirably situated for the latter object, being so close to the town and so convenient to water. The cost may amount to a good deal, but if the circumstance of the increasing population and the continual enlargement of the town be considered, a wiser step could scarcely be taken than to secure it for ever.

But Leeds ought to have a park of one hundred acres, and the very best situation for one, is about a quarter of a mile to the north-east of Burmantoss. Here is both high land and low levels, with no less than three water-courses, or brooks or rills, offering every capability of being studded with groves, walks, plantations, and ponds by banking up the rills. It would be a wonderful improvement to the East end of the town.

Three hundred acres on Woodhouse Moor should also be secured for ever for the manœuvring of troops.

An opening should be made from York-street into Kirkgate by prolonging the former in a straight line to the latter; and it should be of a good width.

The street called Swinegate (what a genteel name!) is undergoing the operation of increasing its width, but it is not being widened half enough; and the best operation that could be performed upon it, would be, to sweep the whole place from the face of the earth: no alteration can improve it, it is such an inconvenient and ill-planned part of the town.

Wellington-street, as drawn in the plan of the town, appears to be a handsome, straight, long and wide street. It should be carried on in a straight line through Quebec to the south end of the White Cloth Hall and thence to the south side of St. Peter's Church, and terminate on the East side of the town: this would be a very useful improvement and be a direct passage through the South part of the town from East to West, at the same time that it would make one of the finest

streets for length, width, and straightness, next to Briggate (which it would cross) in the town.

All the new roads and new streets suggested by Mr. Fowler and dotted on a plan of the town printed since 1826, are judiciously laid down, yet none of them have been executed as yet, as far as I could learn.

I am glad to see the authorities of the town have ordered that a building recently erected by some one, in Union-row, Quarry-hill, contrary to the Improvement Act, should be levelled; and that they have also ordered the surveying, and if needful, taking down, a house dangerous to people's lives from want of repair or age, in Albion-street. A little discipline of this kind will do a great deal of good, and teach people to keep their houses in decent trim and prevent builders in future from spoiling a town by ill-placed buildings.

A great improvement might be made in East-street, from the corner next the Palace Inn, to the issuing of the Beck beyond the road leading to the Crown Point Bridge: it would be a great public advantage, and could be effected now at much less expense than if deferred to another period.

At some future time a great thoroughfare will be found to be necessary from East to West in the northern parts of Leeds, and it would be wise to begin early and provide a grand wide street for that purpose. The best line that at present offers for its formation is Park-lane, Guilford-street, Upper Head-row, Lower Head-row, and Lady-lane; and thus form a junction with Quarry-hill.

This grand thoroughfare should be thirty yards wide throughout.

Heavy complaints are made of the crowded state of the Free Market, and it is to be hoped that the Improvement Commissioners will be induced to take measures for the enlargement thereof. A majority of the pigs in the market come down Quarry-hill, and have to be driven up George's-street. An entrance might be made from Mill-Gath, by pulling down the cottages between that place and the present Pig-market; also by pulling down the houses at the North end of the Boot and Shoe-yard, and adding a great part of Mr. Smith's yard thereto; also Mill Garth to Mr. Hargreave's mill. Perhaps, the rate at which the additional space would let, might make it a good commercial speculation, in addition to better accommodation to the market people. If this improvement cannot be effected, another and more spacious site should be provided for a Free Market in another quarter of the township; but horned cattle should be once, and for ever interdicted from entering the town at any time.

HALIFAX.

THE town of Halifax, in Yorkshire, although not so dirty as Leeds, yet possesses several small bye-streets and lanes, so shabby and filthy, that they would look quite natural if they were transplanted to the worst purlieus of old Drury; but as Halifax is an ancient town, we must not quarrel with the

relics of times, when regularity of plans, and utility, health, comfort, convenience, and beauty in building of streets, were things as far from the thoughts of men as was the invention of locomotive carriages: the wealth of the inhabitants too, was not perhaps a ten-thousandth part of what it is now. All that we can do is to amend the faults of our ancestors, and to act for the future upon a wiser code of plan-drawing.

There is not at present a more opulent town in England than Halifax, for its size and population; nor a town more capable of receiving improvement, or that more wants it. A number of little pitiful new streets have sprung up within these few years, in different quarters of the town, in the most irregular situations, and in some respects annoying to the inhabitants themselves, by their having blocked up some thoroughfares and short cuts to different places. I have, myself, gone up one or two of the new streets, and have been called out to by some good woman—"There is no passage that way, Sir; you must return, and go down that lane, then turn to the right into a lane, at the top of which you will come to a street, at the bottom of which you will get into the street you want."

Halifax is a mass of little, miserable, narrow, ill-looking streets, jumbled together in chaotic confusion, as if they had all been in a sack, and emptied out together upon the ground, one rolling this way, another rolling that way, and each standing where chance happened to throw it: there is not one handsome or long street in the town, and the cause of this is the want of previously survey-

ing the ground for the town, and properly laying out the ground-plans of convenient and noble streets upon paper, and that not merely for one street, but for scores of future streets, which may be wanted for the next two or three hundred years.

As the town lies upon a slope it is easily drained of the waters from heavy rains and thaws of snow; but woe to ladies' dresses, in the narrow streets, and on the still narrower foot-pavements on each side; for, although the carriage-ways are all paved with stones, yet for mud and slush I will match them against the worst streets of ancient London, and this is owing to their narrowness and the great traffic in them.

There is not one handsome shop in all the town, and yet it is said that the people of Halifax think of nothing else but money-getting. How can they expect to get money without some attention to outward show and attraction?

There have been lately erected several good-looking buildings, such as the Infirmary, the Museum, two or three new churches, the Northgate Hotel, and the Odd Fellows' Hall, the latter being by far the handsomest edifice in the town; but this and all the other new buildings are unaccountably placed in some bye-lane, as if studiously selected to hide them from the sight of travellers passing through the town, and where they are seldom seen but by the few neighbours living near them; and certainly no stranger would ever think of looking for them where they are placed. It was by chance that I discovered the Odd Fellows' Hall, and the Roman Catholic Church. The Peace

Hall, a large quadrangular building, open in the centre, is perhaps one of the most curious and oriental piles in England; but it is completely hidden from public view by houses, nearly on all sides, and indeed its exterior is scarcely worth being seen. The interior is so strikingly like a caravansarai, that I could almost have fancied myself back in India the first time I saw it. I have more than once lodged a night in an immense open choultry exactly like it, in my travels in the East.

I propose to point out a few alterations, which, if executed, would make Halifax a charming town; and, although it is not to be expected that all could be done at once, yet if the general ground-plan was first engraved on paper, and in the hands of proprietors of property, portions of the improvements could be accomplished from time to time, according as funds were raised by shares, capitalists, and loans; and many proprietors of freehold property would rebuild new houses agreeably to the plan, when their old houses became so decayed with age as not to make much difference in the expense of removing the site or erecting new. I have been made aware of the very illiberal spirit and selfish feelings of one or two individuals who refused to sell their houses except for most exorbitant prices, for the purpose of throwing back the said houses, in order to widen a street: such people are to be found in every town; and therefore, where a generous public spirit is wanting, it should be bribed into compliance by conceding their claims; and if their foreheads can bear the exposure of extortion they are quite welcome. Owners of property should never be paid less than

what they gave for their property, if it be thought reasonable by competent judges. To pay a man less for his field or his house than what he gave for it, and at the same time compel him to sell it at such lower value, would be the way to ruin him, and be a gross act of tyranny; but such is scarcely ever the case in public improvements, and I believe that private interests generally gain something on these occasions. Improvements in country towns are frequently opposed by people from motives that they dare not name or avow; but the secret is religious hatred, or party spirit.

There are three principal entrances into Halifax, viz., the first from London, viâ Huddersfield, Shaw Syke, South Parade, and Church-street. Church-street should be extended in a straight line to Shaw Syke, and widened to the width of twenty-six yards the whole length, that is, a width of twenty yards for carriage-way, and three yards on each side for foot-pavements. The slip of land required for this purpose, either on one or both sides the road, should be purchased by the public now, before any more houses are erected, and then it will be an eligible road to build upon, or to form a street of shops, for many hundred years to come. The second entrance into Halifax is from the West; viâ King-Cross-lane, and King-Cross-street. The third entrance is from the North; viâ Leeds and Bradford.

King-Cross-street might be continued in nearly a straight line completely through the town, down to the venerable gothic cathedral-looking St. John's Church; and it would form as beautiful a street as any to be found in the country towns. This

could be effected by the purchase and removal of a few houses, and the exchange of the old sites with the owners for new sites, and I think no person would be a loser either in his pocket or in his business. This new wide street would take in all King-Cross-street and Bull-green, the south side of which latter would have to come down to widen it, and bring it in a line with the south side of George-street; the north side of George-street would also have to come down, and be rebuilt further back, so as to be in a line with the north side of Cheapside-street; the south sides of Cheapside and Russel streets would have to come down, and be rebuilt in a line with the south side of George-street: the new street might be carried on from thence, either by throwing back the south sides of Woolshops-street and King-street, or running it along the back of those two streets, and thence along the Causeway and the north side of the church-yard, to a handsome new bridge, to be erected there across the valley, on a level with the surface of the church-yard. The blocks of miserable cottages in that neighbourhood being removed, the church-yard might be widened on that side as much as might be necessary, to join it to the new street. The new street should be twenty-six yards wide at its narrowest spot, including three yards of foot-pavement on each side. This alteration alone would make Halifax a respectable town, and handsome buildings might be reared from time to time, in the course of different generations; but I have to propose three cross streets, to intersect the grand long street at right angles. The first is, to join Northgate to Market-street in a straight line,

by widening the east side of the former, from the Unitarian Chapel (opposite the Northgate Hotel) to the corner of Woolshop-street, and a few houses at the end of Market-street, and extending the same street and Union-street in a direct straight line down to Shaw Syke; the whole street to be twenty-six or thirty yards wide at its narrowest part. This street would cut through some private fields and a shrubbery at Hope-house, which, for any other purpose, would be to be regretted; but perhaps the patriotic owner of that property would never raise an objection to any great public improvement or extension of plans, which would confer a lasting benefit upon the town, and endure for ages after the local affections for particular places had been laid in the grave.

The second cross street or intersection is to join Cabbage-lane to Harrison-lane, in a straight line, by widening Cow-green and Barum-top on their East sides, and all the ends of petty streets and blocks of houses on the same side, and continuing Harrison-lane in a straight line a mile further to the South; the width of the street should be twenty-six yards.

The third intersecting street is, to lay out an entire new street, a little to the Eastward of the new Poor-house, and to extend one mile each way, due North and South from that building as a centre; this street to run parallel with Cabbage-lane and Harrison-lane, and be twenty-six yards wide.

The foregoing three divisions of the town would enable all the smaller streets to be improved in

due time, and lengthened to join one or other of the grand intersecting streets; as many of the houses are even now ready to tumble down with age, so that numbers of the inhabitants would remove from them to the wide and cheerful new streets; and for every *two* old houses so vacated, there should be *one* new one erected in their place, and on improved plans and dimensions; and proceeding in this course, it would leave nothing to be desired.

It is upon these principles that the London improvements have been conducted; the widening, joining, and straightening of the great arteries for the more easy circulation of human beings, brings people from distant parts of a town closer together, by rendering access to each other easier, acts as a thread to a labyrinth, and makes people's residences easier to find. It is also useful to visitors and foreigners, who find it difficult to grope their way about a town full of small streets where there are not some main thoroughfares to guide them.

The two minor streets, Carlton-street and Horton-street, might also be very easily joined together in a straight line, and make one handsome street; there is but one building in the way of this union; and Carlton-street might be continued straight to West Parade. Mount-street might be prolonged Westward to join the proposed new Poor House-street, or third cross street. North Parade-street might also be prolonged Westward to join the proposed third cross street. Another street might be laid out parallel to North Parade, and extend from Cross-hills, or Bowling Dykes, Westward to the proposed third cross-street, making Stannary-lane part of it. And on the

south-side of the town a new street might be laid out from Shaw Syke in a straight line to join the proposed new third cross street a little south of Savile Hall. All these streets should be straight, and twenty-six yards wide, and the plan being once published and known, builders should be obliged to conform to it for ever.

A gallery for pictures and a Royal Exchange might be built on the north side of Woolshop-street, directly opposite the Peace Hall, forming with that building two sides of a capacious square, for as the latter building is almost always under lock and key, it cannot be used as an Exchange by the foreigners and strangers who come to Halifax; and the other two sides of the square might be formed into *Piazzas* and bazar-shops; for a covered walk is much wanted in Halifax, as also a new and larger Magistrates' Office, a new theatre, and a new jail; the latter should stand in a more airy situation and contiguous to the Court-House, wherever that may may be built.

The custom of allowing cattle and pigs to stand in the streets on market days, blocking up the thoroughfares and endangering people's lives, ought to be abolished throughout the empire by an Act of the Legislature. At Colchester, I have frequently seen groups of women flying in all directions from the worried animals in the High-street. There ought to be a field full of pens for cattle, pigs, and sheep, outside the town, and not within the town: cattle should not be permitted to be driven into a town at any time.

The mountain called Law-hill that immediately overlooks the town of Halifax, is also sadly

neglected; it is not much better in appearance than a wild bleak moor from top to bottom, with a small black stunted wood in one spot, and a few cottages near its base. Now this very mountain, (I mean only that face of it seen from the town) might be made one of the principal objects of attraction, delight, amusement, and scenery, to Halifax, and indeed to the neighbourhood for two or three miles around. In the hands of a Hindoo community, this hill would be the principal lion of the place, and attract strangers from all parts of England to see it; they would have studded its capacious side with pagodas, swamy-houses, temples of all shapes, choultries, and hermitages for fakeers and devotees; they would have scarped away the soil or the rock in innumerable places for small level areas for these buildings, and thousands of zig-zag footpaths would traverse the side of the hill in all directions to their romantic little temples, branching off from some main ascent up the hill. I have seen just such a mountain in several places in India, studded exactly as I have described, many of the temples consisting only of a single room, ten feet or fifteen feet square, some lofty, some low, some open, some enclosed; some shaded by trees, others exposed to the full blaze of an Eastern sun, all built with hewn stone and mortar, or brick and chunam, most of them whitened outside, many of a stone colour, and many more painted tastefully or fantastically in compartments and pannels of red and grey. On occasions of Hindoo festivals, when the town below is crowded with people, the side of the hill will swarm with thousands of the

neighbouring inhabitants going up and coming down, some having ascended to feast their eyes on what is passing in the town, others to leave an offering of rice at some little diminutive temple on the hill side. And at night, the whole hill will seem illuminated by the numerous oil lamps (made of earthenware, like saucers, and containing coco-nut oil, and a wick of cotton thread,) placed in the innumerable little buildings, so that night or day, for many days together, the whole place will appear to a stranger like a disturbed ant-hill, all in motion, running wild with pleasure, and yet not a single case of inebriety. And then Hindoo music is heard in all places, the tamtams, the collory horns, drones, trumpets, clarionets, cymbals, tambours, flutes, whistles, &c., &c. A procession of the idol proceeds all round the town by day, accompanied by troops of dancers and music, and by nearly half the population, who shout at intervals the name of the idol, while guns are fired by such of the mob as can afford a fowling piece, matchlock, or pistol; the same procession occurs again at night, and continues nearly all night, lighted by a number of flambeaus, (made of cotton rags rolled round a stick, and fed with oil by the hand.) Wherever there is a hill near a Hindoo town, it is made subservient to their romantic habits, their delightful religious festivals, and their numerous holidays; while, on the contrary, the civilized English know not what pleasure is, (unless it be drunkenness,) nor romance, nor scenery either.

The miserable climate of England may be some excuse for this, yet even the hill of Halifax might

be adorned and decorated with appropriate little cottages, pavilions, kiosks, summer-houses, temples, tea and coffee canteens, sycamore groves, and long alleys, suitable to the miserable climate. It would be well if the English would throw off the phlegmatic, cold, calculating, money-saving habits they seem so fond of, and join together with a little more generous public spirit in local enterprises, uniting *pleasure* with schemes for improvement.

I am no advocate for Zoological Gardens; there are too many in the kingdom already, and it is painful to think what a quantity of good food is given to wild beasts, while so many thousands of our fellow-creatures know not where to get a dinner and have not employment to earn one: but I am a strong advocate for a large Botanical Garden uniting within it, the fruit, flower, vegetable, and pleasure garden and park; and fifty acres laid out as such, for the use of the public, to the northward of, and in the neighbourhood of the Halifax New Poor-house, would be a great good to the town, and to the well-conducted and industrious classes of society especially. A fine garden with beautiful broad gravel walks overshadowed and lined with lovely *standard* apple trees on each side loaded with rosy fruit, might make many a happy couple fancy themselves in Paradise, and taste of the forbidden fruit by paying two pence or three pence, *the rule being, to eat as much as you dare, but pocket none;* and it would be a near, a rational, and a healthy place of resort for all classes.

The foregoing suggested improvements of the

streets of Halifax, do not look so well, traced upon paper over the old plan, as they would look in nature. I have walked over the ground and matured the plans on the spot, and I am as sure of the possibility of their execution and of their utility, as I am of the regrets that a distant generation will express, that we, their ancestors, did not fulfil them. I am told that the population of the parish now amounts to one hundred and ten thousand souls, and will double that number in a few years ; it is therefore worth while to make the town attractive by a twofold measure, that of building it upon some regular and established plan, and at the same time providing for a vast increase of inhabitants.

If cities were always built in the first instance from regular plans traced upon paper with wisdom and taste, each house might have a rood or half a rood of ground behind it, which would add greatly to the health and convenience of its inmates, and in some countries also gives a delightful aspect to a city. Some cities in the East seem as if they were planted in a garden : Norwich, in England, is one of this sort, and it looks beautiful, from whatever quarter viewed. But it is to be lamented that in most ancient towns there are hundreds of houses that cannot have a breath of air at the back, and consequently the smoke from surrounding chimneys enters the rooms and remains in them in a stagnated state, exceedingly trying to the lungs of the inhabitants. It is not too late to begin a reform in the plans of towns and houses : thousands of ancient streets and houses are naturally crumbling with age and will fall down if they

are not pulled down: the object should be, to rebuild according to approved plans: much has been done in some towns and the results have been very satisfactory to the inhabitants, and an encouragement to go on and prosper. Let it not be said that there is a want of money, or a want of land, or a want of labourers: one noble-minded individual at Newcastle has done twice as much for that town and with his own single fortune, and, as might be expected, it made him richer than ever. I believe that there are ten wealthy individuals in the parish of Halifax for one at Newcastle, but they require the subject to be brought to their notice; mercantile affairs have hitherto occupied their attention and time, it is to be hoped there will be found neither a want of will nor a want of energy to set some improvements a-going; time, patience, and perseverance will conquer all obstacles, and whatever is done for the benefit of human beings and done with a good spirit, may generally count upon the blessing of Divine Providence.

MANCHESTER.

MANCHESTER, although a modern town, is full of faults. In one or two of the streets a kind of market is daily held, that is, a line of canvas sheds and booths are erected and very much obstruct the thoroughfare for carts, while groups of people on the foot pavements buying articles of the barrow-women and stalls, also obstruct and stop

up the foot-way for passengers: this shews the want of a good capacious covered market; and for so large a town there ought to be five or six such covered markets, and each market should have three or four distinct streets or stalls, say one street for butchers' meat, one street for fish or poultry, one street for vegetables and fruit, and one street for miscellaneous things: a market-place built upon this plan would be much better than having a separate market for meat in one part of the town, and then have to go a mile to another part of the town for vegetables, and then another mile to another market for poultry or fish. It occupies too much of a day's time to go a-marketing when every article that is wanted is sold at a different market, sometimes at a good distance from each other.

One great fault in Manchester is the having placed some of their finest buildings in comparatively little-known streets: at least not easily found by a stranger. The Town Hall for instance,—if this very noble building had been built at the end of one of the largest and most public streets, so as to face down the street and be seen from a distance, what a grand effect it would have had; as it is, I passed the building by chance, and there must be thousands of strangers that never see it at all, standing as it does, in that retired, dull, quiet spot, King-street.

The following alterations are required in Manchester, to improve the town and make the thoroughfares commodious and handsome.

Market-street should be carried on in a straight line, and of the same width or wider, down to the

river Irwell; and this could be done by simply throwing back the north side of St. Mary's Gate and Blackfriars, so as to be in the same line as the north side of Market-street. I think no one could say otherwise than that this would then be a grand street. The present position of those streets is so evidently spoiled, that it must be obvious to every body, and it struck me at first sight, as I was walking from one to the other.

A thoroughfare should be made on both banks of the river Irwell, entirely through Manchester and Salford. No obstacle should be allowed to prevent this alteration, as nothing is more delightful than to walk by a river in a city or a town.

That long, narrow, crowded, sloppy, muddy, dusty, busy street, called Dean's Gate, should be widened from one end to the other, and straightened at its north end, in the vicinity of Victoria Bridge. Twenty-six yards would not be too great a width for this crowded thoroughfare.

An open square should be formed in front of the Town Hall in King-street, by clearing away that stack of houses between Cross-street and Essex-street. And King-street itself should be widened all the way down to New Bailey Bridge, and also prolonged in a direct line to Mosley-street.

St. Ann's-square should be prolonged to King-street, and thus make St. Ann's Church stand nearly in the middle of the square. This opening would bring together some of the respectable parts of the town that are now divided.

A fine wide street should be carried from the front of the Exchange, through Old Mill Gate and Long Mill Gate (passing the Collegiate Church

and displaying it), down to the east side of the College, and abut on the river Irk. This alteration would bring the Cathedral to the Exchange, and strangers would know, for the first time, that there was such an edifice worth seeing. I only found it out by chance. The market-people, who occupy the streets in front of the Exchange, should be removed and located somewhere else. If the stack of buildings, enclosed between Cockpit Hall and McDonald's-lane, were cleared away, that site would be more appropriate for a market-place than suffering the crowds to block up the streets: a large covered market should be erected there. That large open space in front of the Exchange should have a statue of Queen Alexandrina placed in the centre, which would be a great ornament, and much improve the neighbourhood of that focus of commerce.

I am no advocate for placing churches or any other buildings in the middle of a street, as it completely spoils the view up and down a street, and thus Mosley-street is spoiled by St. Peter's Church, at the same time that the church would have looked as well, and been more quietly situated, if it had been built on one side of St. Peter's-square, and the street carried through the centre of the square.

The whole of Lower Mosley-street should be widened, and Upper Mosley-street should be brought into one line with Oldham-road, by throwing back the north-west side of Oldham-street, so as to be in the same line: this would require the entire removal of five long stacks of houses, but the alteration would make a grand street and an

improvement that could not be regretted, provided it be conducted judiciously, as the houses became old and decayed and worth little more than the ground they stood upon. The disjointed appearance of this line of streets is so obvious to a stranger perambulating them, that it struck me at first sight.

Great Bridgewater-street should be widened and form one line with Liverpool-road.

The whole of Portland-street should be widened to its junction with Great Ancoats, and also carried on straight and wide to Great Bridgewater-street.

Cannon-street should be made straight to Victoria Bridge, by throwing back the south side of Cateaton-street.

Swan-street and Miller's-street should be made of the same width as Great Ancoats, all the way to Ducie Bridge; and a carriage-thoroughfare should be made along the bank of the river Irk from that bridge to the College, which would just complete all my suggested improvements for Manchester.

The streets and lines of thoroughfare, here pointed out, would embrace nearly all the principal scenes of business, science, pleasure, respectability, and population, within an oblong square so well defined, that people might perambulate the town, from one part to another, through noble and delightful streets, communicating with each other rectangularly, and rendering it almost impossible for even a stranger to be at a loss to find his way with the greatest facility to any part of the town.

The wide part of Great Ancoats is about one of

the best proportioned streets I have seen in any country town: it is neither too wide nor too narrow, being of that excellent width, that it is in no danger of ever being blocked up with carriages, though the traffic were to increase a hundred fold, at the same time it is narrow enough, to be lighted properly in the centre by the lamps on the foot-paths, at each side.

Oldham-road, on the contrary, appears to be of so great a width, between the houses on one side and the houses on the other, that in a very dark foggy night, I should think it could not be well lighted in the middle, owing to the distance of the lamps on the foot-pavements.

But the fault is in the foot-ways of Oldham-road, which are of a most absurd width, and made exactly the reverse of what they ought to be; for that part of it paved with flagstones should be next the houses, and that part paved with round pebbles (which, by-the-bye, are exceedingly irksome and difficult to walk upon) should be next the carriage way.

What need is there for having a foot-way thirty or forty feet wide? What a deal of ground is wasted in this way in Oldham-street. In the most thronged streets of London, a foot-pavement need not be wider than five or six yards; every foot beyond this width has neither regard to beauty nor utility: and here I must remark, that the width of a foot-pavement has a great deal to do with the beauty of the shops and the appearance of the houses generally; in fact, people in carriages and cabriolets can scarcely see what is in the shop-windows, when they are kept at the

awful distance of thirty or forty feet by such a wide foot-pavement.

It is as great a fault to make a street too wide as it is to make it too narrow, for let the population of a city be ever so numerous, and the throng of carriages and carts ever so great, yet a too-wide street cannot be sufficiently lighted all across it, so as to ensure safety and prevent accidents in dark nights: there may be excellent lamps on each side, and yet people will frequently be in danger of being run over when crossing in a dark night, owing to the obscurity of the centre of the street: and, especially, in the fogs of November, a person in the middle of a too-wide street, is in the most imminent peril of his life, as he hears a carriage coming rapidly upon him, and it is utterly impossible for some minutes to tell whether it is on his right hand or his left, or whether it is before or behind him. There ought to be a line of white stones along the centre of the pavement of any street that is of an unusual width, and a line of lamps along the said line of white stones.

A street wider than thirty or forty yards, inclusive of two spacious foot-pavements, has no regard to utility, and is, besides, a heavy expense to keep in repair.

One or two Arcades are much wanted at Manchester for customers and visitors in rainy weather. A gallery for pictures, and sundry other buildings of science, commerce, and pleasure, are desiderata in this improving town. New lines for the old narrow streets should be marked out and drawn on the plan of the town, and new public buildings marked here and there, and then, whenever an old

house was intended to be pulled down, the new one should be erected on the new line.

CHESTER.

THE city of Chester, one of the most venerable in England, wants the following improvements; viz. 1st, The city rampart or wall to be repaired, and wherever it is pulled down, discontinued, or stopped up, to be rebuilt, and continued quite round the city, for a promenade for the inhabitants, the enjoyment of the air, and the music of the garrison-band. 2nd, To repair their piazza, or covered street, and not only to carry the said piazza the whole length of the street, but to have it on both sides the same street on the same plan, and at the same half-story height. There are some articles which require a good deal of outward show, such as silks, prints, shawls, furniture, bonnets, pictures, music, curiosities, &c. &c., and a few such shops would do very well under a piazza, as nothing creates so much ennui at home as rainy weather; but if people cannot amuse themselves at the shop-windows (which, nine cases in ten, are the temptations to lay out their money) without being wet or drenched with rain, or breaking the panes of glass with an umbrella, (sometimes a score of umbrellas are knocking at the same window,) they may as well stay at home.

Chester is a city swarming with inns, taverns, and lodging-houses; now, so much inconvenience arises to strangers from there being more than

one house having the same sign, that there should be a heavy penalty levied on any person who opens an inn or tavern with the same sign as another. A gentleman travelling through Chester once, was referred to the Nag's Head to be taken up there by the coach: he happened to go to a new house with the sign of the Nag's Head, set up in opposition to the old one, while the coach stopped at and waited for him half-an-hour at the latter, and at length drove away without him, and the Coach-office people refused to return the money, because he had unconsciously been the cause of detaining the coach so long after its time, to the injury of the other passengers. It was a shameful transaction, as the landlord of the new Nag's Head said the coach would be at his door every minute, which he knew was a falsehood; but the trick, however, answered the landlord's purpose, as the traveller was obliged to stay another night at his house, and take three more meals there. It was all owing to that infamous custom of setting up opposition-houses *with the same sign*, and it should be put an end to by severe penalties, and severe examples made of offenders. Perhaps hundreds had lost their money and their place in a coach by similar deception.

The foot-pavements and paving of the streets are very bad in Chester, and want a thorough reform. There are some streets without any foot-pavement.

LIVERPOOL.

LIVERPOOL is a splendid town, yet it has its drawbacks and deformities. There is a foundry in the very centre of the town, surrounded by a parcel of little dirty, filthy, narrow streets, in which are concentrated all the horribly bad smells that ever united to knock a stranger down; and, as if this were not enough, people are obliged to walk in the middle of these narrow muddy streets; in some places, for want of a paved side-path either on one or both sides. The citizens should pull down the foundry, the dyehouse, and the distillery, and remove these buildings quite outside the town: they are very prejudicial to the health and cleanliness of the place in their present locality. Next, the citizens should transplant the crowded poor people from that centre of attraction for bad smells, to a handsome new street in the suburbs, where the honest operatives might have some chance of enjoying cleanly ways, comfortable houses, and feel that they are members of the human family, and not beasts of the mire and clay. They should pull down those black, wretched, dirty, unhealthy streets of hovels in the centre of the town, and make the spot a capacious open square, surrounded by good houses, with piazzas to the ground-floor, balconies to the first and second story windows, and a shrubbery in the centre, inclosed with Chinese railing. The citizens should next bring up all the numerous poor families from their cellars, and oblige them to live above ground like their forefathers, and no longer suffer them to

copy after the mole and the rat, by living under ground. Cellars were made for such unintellectual things as coals, wines, potatoes, malt-liquors, &c., and not for animals possessing lungs: garrets at the tip-top of a tall house are far preferable for a residence, as far as it regards purity of atmosphere.

They should also remove that stockade, or fort, or battery, or whatever it is called, to another mile down the river, and make the fortress large enough and strong enough, not only to contain barracks for three entire regiments, but also to be a real defence to the river, and an outpost to the town itself: at present it is a burlesque on fortification, and might be taken and demolished by a troop of old women. Some day or other, eighty thousand Frenchmen and Americans will make a descent near Liverpool, and give some trouble.

The citizens of Liverpool should dig all that swamp at the West end of the town, along the river-side, which is overflowed by the tide, and which they are now endeavouring to fill up, four or five feet deep all over, making the bottom every where level at that depth, and keep it always full of water by a parapet or wall between it and the river; and they might have a picturesque island in the centre, covered with shrubbery, and ornamented with alcoves and a Chinese pagoda; and then they would have a very pretty lake, a mile long, and half-a-mile broad, perfectly safe for the delightful recreation of boating with oars or sails, parties of pleasure for bathing and fishing; for none of these amusements can be followed with any safety on the deep, broad Mersey, which is a

dangerous place for young land-sailors and ladies fond of boating.

They should pull down one of those stupendous ranges of warehouses, or stores, which overlook the river and docks at the West end of the town, and build a series of hotels, taverns, inns, and public-houses on the site; or perhaps they could metamorphose the gigantic building into a number of hotels, inns, and lodging-houses, without pulling it down: when strangers go to Liverpool, it is not to bury themselves in the back or centre streets; they want to see the majestic stream, the noble ships, the crowded quays, the busy docks, and to enjoy the fresh air, and snuff up the sea-breeze wafted along the wave: all this might be enjoyed from the windows of hotels and lodging-houses without the excessive fatigue of being perpetually on one's legs. I was much disappointed in not being able to procure a lodging that overlooked the noble Mersey, the only hotel along the river-side being full of strangers. Suppose only one hundred strangers to arrive at Liverpool each day, it gives more than thirty-six thousand visitors a-year; and I rather think, from what I saw during my short stay, that this is not one-tenth of the number.

And before any more streets be built, they should have the land all round the town surveyed, and a ground plan of new streets laid out on paper, in the first instance, and the plan should embrace latitude and extent enough (with every possible suggested improvement,) to occupy three hundred years to come; and it might include within it a river Steyne, or mall, or marine parade, like the Steyne at Brighton, in Sussex.

I conclude with one more observation, and that is, they should look well to the habitations of the very poor people and endeavour to induce them to keep their houses and shops and themselves a little cleaner, for I never saw such horrible holes, or so much filth, no,—not in the dirtiest alleys in London, before the improvements; and, as might be expected, disagreeable irruptions and loathsome diseases are caught at Liverpool without knowing how or when. Why are there not some floating baths instituted by the Lord Mayor and Corporation, which should be open to the public, and free of expense to the labouring classes? Such an institution would effect the greatest good.

COLCHESTER.

A PROPOSAL was published some years ago to improve the town of Colchester, in Essex, by effecting certain alterations: the first was, to remove the church of St. Runawald from the middle of High-street, it being a little shabby ugly building, and a sad obstruction to the thoroughfare of that otherwise fine street. 2nd:—In place of a narrow lane which cuts the town in two, and opens out nearly opposite that little church (St. Runawald's) a handsome new broad street was to be built, to reach from one side of the town to the other, and the church of St. Runawald to be rebuilt of larger dimensions on one side of the said new street, and as near the original site as might be practicable. 3rd: — The dwelling houses

which intercept the view of the castle from High-street were to be pulled down, and the whole space to be paved and left open for the use of public processions to the Castle, and for the better display of that relic of antiquity. 4th:—A new prison to be erected elsewhere out of sight, and the prisoners to be no longer confined in the castle. 5th:—The Castle being private property, it was suggested that it should be purchased for the purposes of the Corporation festivals and duties, and be thoroughly repaired and restored within and without, and no longer be suffered to go to decay, and the interior to be rebuilt and formed into suites of handsome and noble rooms, and made subservient to all the purposes the Moot Hall, or Guild Hall is now used for, and thus become a venerable and majestic ornament to the town, instead of being a mere ruin inhabited by prisoners; and the Moot Hall, which is a disgrace to so handsome a town as Colchester, to be altered into a private house. Corporation dinners and balls, holiday festivals and civic ceremonies to be celebrated in the Castle as the most appropriate place for grandeur and pomp; also courts of justice might sit there. The custom of fixing hurdles in the streets, and holding cattle markets and fairs in them was also recommended to be forbidden; and several other useful improvements were suggested.

These proposals were met by a kind of opposition cry of—"Whence are the funds to come from to effect these alterations and improvements? As to the utility to be derived from them most people are perfectly agreed, but the plans would

cost an immense sum of money, and the Commissioners have not one-tenth part sufficient to put them in execution."

Opposers of public improvements always tread upon the same ground of error, namely—the idea that such things must be done in a moment; and this begets the very natural question of "From whence are the funds to come?" It has been said of Legislation, that we should legislate for those who are to come after us, as well as for the present generation; and it may be said with equal propriety and force, that "we should build and improve for those who are to come after us, as well as for the present;" and if we fulfilled this maxim, it would beget more extended ideas, and more expansive liberality, and not such selfish narrow plans as circumscribe each one's present desires. If the Romans, when in possession of London, had been asked to draw a plan on paper of the present metropolis, and to build it, they would have said "it is impossible!—where are the funds to come from?" Yet time has proved that it was not impossible; and the most gigantic plans can be accomplished by time, perseverance, and patience.

Again:—The Improvement Commissioners are referred to, as if they had any thing to do in the matter; and indeed from their title one might easily be led into the mistake that they have; but the fact is, they have no power or authority to put in their interference in any alterations or beautifyings taken in hand by a body of inhabitants. Improvement Commissioners were mainly instituted to take care of the sewers and the

pavements, to do away with obstructions in thoroughfares, to remove nuisances, and generally to effect such obvious improvements in towns as affect the nation at large; but they have no right to interfere in the beautifying of a town, unless their duty called upon them to see that the public comfort and convenience be not encroached upon: excepting where more authority is delegated to them by, and specific objects are stated in, an Act of Parliament.

They have no right to prevent the population of a town from subscribing a penny a week for the purchase and removal of an old house standing in an inconvenient situation. For instance, they could not prevent the populace of London from subscribing a penny a-piece to remove the houses which intercepted the view of St. Bride's Church from Fleet-street, which was afterwards effected.

They have no right to prevent the owner of a house in Halifax from pulling it down and rebuilding it further back. They have no right to interfere with an association of public-spirited individuals in the building of a new street, or in the straightening and widening of an old one. They have no right to prevent any body or society from forming public gardens, erecting an arcade, or digging a piece of water for boating and swimming. And the only right they have, is to see that the new streets be of a proper width, and efficiently drained, for the sake of the health of their inhabitants, and to compel good pavements and clean thoroughfares through them, and that each house has a proper *cabinet d'aisance.*

People in business are sometimes afraid of being

injured by the building of a handsome new street; thus, I have been assailed by my friends, Mr. B—, Cheesemonger, of Angel-court; Mr. F—, Bookseller, of Crooked-lane; and Mr. D—, Linen-draper, of Long-alley, that when the grand street is finished they will lose my custom, and that I shall deal only at the grand shops in the grand street; and I have had much ado to quiet their fears, and to persuade them that we do not quit old friends, though the Pope himself should set up a shop in the grand street; at length, when they were convinced that the grand streets would increase the opulence of the town, they were as much in favour of the improvements as they were before against them.

There is another mistake which obtains possession of some people's minds, namely, that an Act of Parliament is requisite, before a street or a house can be altered or removed. This entirely depends upon the undertakers themselves; if the alteration be a great public benefit, and yet meets with a spiteful opposition from some owners of property, who are ever ready to assert their expected injuries by it, but which are in general visionary, inasmuch as a new site for business in an improved neighbourhood and more eligible situation, must be a *gain* rather than an *injury;* why, then the safest proceeding would be to have the authority of an Act of Parliament; but when there is no opposition, and all parties are cordially united, and agreed upon an alteration or improvement, there is no need of any law for its accomplishment.

Of course, all improvements suppose that

owners of property in a house or houses, that are to be pulled down, or in land that is to be occupied, are protected from loss by fair and honourable valuation, as well as an equivalent in the exchange of and choice of a new house, or a new site, if required. A ground-plan should be engraved and published, of all the improvements that a single town is capable of for three hundred years to come, and as years roll away, the different portions of the plan might be accomplished from time to time; wealth would increase, and not only accelerate, but stimulate their execution; and every body would be delighted with the beautiful arrangements and appearance of their native town. Who can view the sublime alterations of the last twenty years in many parts of London, without being absorbed in admiration and delight? What grandeur, what beauty does the architecture of some of the new streets display! and yet it was not all done in a moment; but it is done, and in such perfection that no further improvement in them is possible, and the inhabitants are, very justly, not a little pleased, and not a little grateful to the authorities, for their beautiful new streets.

House-rents were very high during the last war, and one cause might be the want of labourers, owing to the great drain of men for the army and navy. Rents are now as low as they ever can be, and any alteration must ensue in a rise, come when it may; but labourers are plentiful, and may be procured for any great work in multitudes, and at moderate wages. These circumstances are rather favourable for the undertaking of great improvements, and the concluding consideration is the

raising of the necessary funds for commencing. The railroads all over the kingdom are just finished, — the last, I believe, is the one from London to Brighton: I recommend the mode of raising funds for improvement of towns, though on a smaller scale, which has been so successful in the accomplishment of those gigantic enterprises, the railroads, namely, by shares. Shares can be taken by wealthy men of other towns, and also by strangers, as well as by the inhabitants of the town where the improvements are to be made,— and there need not be an Act of Parliament to incorporate a Building Society. Suppose a whole side of an ill-built, crooked, and decayed street, numbered from 1 to 40, to be purchased at the average price of 500*l.* for each of the forty houses, say 20,000*l.*; and pulled down, and twenty good houses with shops, built in their place for 2000*l.* a-piece, say 40,000*l.*, total 60,000*l.*, and each new house lets for 150*l.* a-year, producing 3000*l.* a-year, rent; this would pay the subscribers of the 60,000*l.* five per cent. for the loan, besides the valuable and substantial property being a security. I have known as much as 60*l.* a-year rent paid for a single shop in a market-town, and 100*l.* a-year rent for a single counting-house, without the upper rooms; and there can be no doubt that new handsome houses would pay well, and be very safe property.

When one wretched street was thus improved, finished, and made attractive, the same proceeding could be entered into for the renovation of another; and when this was finished, a third street might be renewed in the same way, good

faith, perseverance, and time, being necessary ingredients in the plan.

There are other ways of raising funds besides the foregoing, such as a tontine, an annual subscription, or even a lottery might be permitted on occasion, for raising new buildings; I merely offer the foregoing hints for the consideration of men of business, who will understand these matters much better than myself, and who would make no difficulty in carrying every plan into execution.

SHEDS ADJOINING DWELLING-HOUSES.

There is a very reprehensible custom among builders in villages and rural districts, that of erecting what is called a lean-to, or shed, against the back or the end of a dwelling-house; for the various purposes of a coal-house, or fire-wood, or a brewery, or workshop, and often for a stall for a horse or a cow. No custom among builders can be more impolitic, or more injurious, nor in the end more expensive; and as there is always plenty of room and spare ground in the country, for erecting these sheds separate and apart from the dwelling-house, there is no excuse for such a senseless custom. The only thing that can be advanced in defence of it, is the saving of the expense of erecting one side wall.

Every year, we read in the newspapers of numbers of dwelling-houses having had the lead stolen from their roofs, and one or two years in particular, when lead was very dear, hundreds of houses all over the country had the lead stripped from their roofs and gutters, and from around the chimney, by thieves during dark nights; and when the rain

or wind made so much noise as to prevent the inmates from hearing what was going on over their heads. On one of these occasions I happened to be lying awake about four o'clock, in the month of November, a very dark morning, when I heard footsteps on the roof of my house, and wondered what my neighbours could be doing there so early in the morning, but supposed something was the matter with the tiling, and never dreamed of their being lead-stealers, for, until I suffered from them I had paid no attention to the accounts in the newspapers: however, a very short time after, I was uncommonly surprised to see the rain penetrate, and water running down the walls of my chambers, exactly under the places where the roof and chimneys had been leaded, and beginning to have suspicions of what the cause was, I went out and examined the roof, and found truly enough that all the lead had been recently stripped from the roof and chimneys.

There is a lean-to or shed at the back of the house, the roof of which slopes down to within seven feet of the ground, and the upper part communicates with another sloping roof, and this leads to the roof of the house: there must have been two thieves, and one was hoisted up by the other, to the lowest roof, and when there, the roofs of the whole pile of building were in his possession.

But there are two other disadvantages in these sheds and lean-tos besides the loss of lead; one is the well known fact that thieves frequently get upon them, and by the removal of a few tiles, effect an easy entrance into a house: the other is the habitual custom of boys at play, who, when

they get their kite entangled, or lose their ball or shuttle-cock on the roof of a house, immediately mount upon the sloping roof of a shed or lean-to, and so from that roof to another, and recover their play-things; and this is such a daily and hourly custom and so universal, that thousands of roofs are injured by the sturdy and careless step of youth, whose feet crack some of the tiles and disarrange a great many more; and, be the roof ever so good, this is the cause, nine times in ten, that owners and occupiers of houses are so perpetually put to the expense of repairing the tileing, but the real cause of the tiles being so often broken is never suspected: thus in the end a house-roof becomes more expensive in repairs than the additional erection of one side wall to a shed or lean-to, in building it apart from a house.

I have been rather prolix, and dwelt rather long on these helps to thieves, but stealing lead is one of the greatest evils of the land, and the punishment of transportation for life ought to be awarded to lead stealers, as thousands of well-papered, dry, and comfortable rooms have been made damp by their daring thefts, and thousands of valuable pictures and framed engravings hanging on the walls have been spoiled with wet and mildew; as well as good furniture and wearing apparel; but worse than all, the health of families have been severely injured through houses becoming damp from the loss of lead, which loss has not been discovered perhaps for some time after it was effected. I state this from experience in many instances.

WATERING THE HIGHWAYS.

The following system of keeping the roads, would be found of considerable benefit to travellers.

Government should erect labourers' detached cottages at certain distances from each other, along the several lines of mail-roads throughout England, to be occupied by pensioned pioneers from the regiments of sappers and miners, engineers, &c.; the inhabitants of each cottage should have the care of a certain portion of road, to keep it in order, and be provided with every necessary to render assistance in case of accidents or robberies, as well as with a large bell to give an alarm along the road in case of need; and, what would be of almost as great consequence to the comfort and pleasure of travellers as level roads, these guardians of the highways should be provided with a horse and water-cart, and they should forfeit their pay if they did not keep the roads well watered in dusty weather.

HULL.

Nothing can be more delightful than groves and public walks in the vicinity of a town, when the site is well chosen as regards prospect-scenery and fresh air, for the townspeople to recreate their minds and bodies, in an evening after a day of close application to a shop or counting house. There was lately a project in contemplation at

Hull, in Yorkshire, to secure a large and complete promenade round the whole of the town. In a paper issued by the Provisional Committee they say "No town in the kingdom is at present so devoid of interesting walks as Hull; and when it is considered that the promenade will extend completely round the town, for a distance of four and a half miles by fifty yards, and contain two spacious foot roads and a splendid carriage road, with rows of trees on each side, it must be admitted that no town will then be able to outvie it. To carry this object into effect, it is proposed to purchase ground, the whole extent of the road, of the width of 150 yards, reserving to the landowners the privilege of forming the road through their own land on the proposed plan, and thereby obtaining excellent *frontages for building*. The road, when completed, is proposed to be thrown open for the public benefit, and the ground *on each side of it* will be equally divided amongst the subscribers by lot; so that each subscriber of 100*l.* will be entitled after conferring an inestimable benefit on the public, to about two thousand square yards of *building-ground*, with a frontage to this splendid promenade or avenue."

Excellent as the intentions of the committee are, the foregoing plan contains a proposal for as great an absurdity as, perhaps, ever was thought of; no less than a public drive and promenade, to be carried through the fields and open country, all round the town for the purposes of recreation and the enjoyment of healthy exercise in the exhilarating air of the *open country* which the inhabitants cannot obtain within the streets of the town; yet

this promenade or road, must forsooth, have building-ground along its whole length, which building-ground will in a few years be occupied by houses and other buildings, and thus the open airy road is to be hedged in on all sides by walls and smoke, and the prospects of the country and the rural scenery of the fields, trees, hedges, herds and flocks are to be shut out!!! When the rows of buildings shall be finished, the road will be no better than a good street in a town, but without the advantages, variety, and pleasure, afforded by the handsome shops of the latter.

How much more beneficial to the public, pleasurable and advantageous to individuals, and novel, beautiful, and varied, would it be, were the space intended for building-ground divided into uniform allotments of half an acre each, and let out at low rents to the townspeople for gardens (and thousands would undoubtedly snatch eagerly at the desirable little plots thus situated in a circle within walking distance of the most delightful resort of the town), binding the tenants down to the observation of one uniform regulation and covenant, of which a few of the articles should be as follows, viz. 1st, That each garden shall have a summer-house, or a kiosk, or minaret, or pagoda, or bower, or arbour, or alcove, or grotto, or cavern, or pavilion, or temple, or sham Chinese bridge, or spire, or monument, or observatory, or cupola, or some other varied edifice erected in the centre of the garden of not less than eight feet square nor more than sixteen feet square, so that no part of the country be obstructed by any large building. 2nd, That no garden shall be allowed to go to or

remain in a weedy or uncultivated condition. 3rd, That no building or edifice whatever, shall be at any time erected in any garden save and except the aforementioned ornamental ones. 4th, That no cattle, large or small, nor any animals whatever, especially goats and rabbits, be allowed to be kept in or to enter any garden. 5th, That orderly behaviour be observed by every person frequenting their gardens. 6th, That at the hour of ten from May to September, and at eight the remaining months, every night, the gardens be quitted by every person; and that they be not entered, on any morning throughout the year before break of day. 7th, That no one tenant shall rent more than two plots at any time, and not more than one plot if there be a claimant left unprovided for. 8th, That no drunkenness be permitted in the gardens, nor on Sundays any work be permitted to be done. 9th, That no subletting or underletting be permitted, nor any garden be permitted to be divided into smaller plots by any wall, railing, fence, hedge, or ditch, &c., save and except the division by walks, paths, fruit trees, flower borders, &c. 10th, That the half-acre lots be divided from each other by a substantial low wall (of brick or stone with mortar) not exceeding four feet in height, and be surrounded by such wall, with a door in front of the road. 11th, That if any running water has a course through the gardens, it be not wastefully or unfairly monopolized or turned off by any occupier of any garden. 12th, That no public meeting either for political or any other purpose be suffered to be held in any garden,—and so forth. To these, the inhabitants

might add such further rules as would suit their locality and other circumstances.

Were the "public promenade or drive, of four and a-half miles all round the town," thus belted, the variety of scene and taste would be as endless as the garden-belt would be beautiful; and while each person would strive to outdo his neighbour, either in the neatness or varied plan and style of the summer-houses, the products of the ground would also sustain considerable rivalry, and, perhaps, not inconsiderable profit; at least, all might hope to reap domestic benefits from fruits and vegetables, having a more delightful place to resort to, and a more healthy exercise at the close of a day of in-door sedentary labour, than that of the tavern, the public-house or dram-shop within the town. These gardens would indeed be an inestimable benefit to the public; but whether a road or promenade, hedged in, either on one or both sides, by lofty houses, will prove so *inestimable a benefit* as the projectors imagine (excepting to their own pockets), perhaps the public will be better judges in a few years than they can be at present.

While on the subject of public walks and gardens, for towns in England, I shall beg leave to throw together a few hints for beautifying towns in Australia.

Suppose a town to be built on a plain, which rises with an easy ascent towards some eminence or picturesque hill a few miles distant: the streets straight and parallel, intersecting each other at right angles, and like those of Cape Town in South Africa, shaded on each side with a row of elm or oak trees, the houses in some streets built with

vitrified brick of large size, in other streets with hewn stone, large and roomy, and substantially erected, with a piazza or verandah in front of them, under which the inhabitants could lounge during the evening and inhale the feshness of the breeze, and be sheltered during the day from the fervid rays of the sun. By means of hydraulic pipes, a plentiful supply of excellent water could be furnished to each house in every part of the town. The public edifices should be elegant and substantial buildings, standing in squares, and the squares and streets be wide and spacious, well laid out and kept extremely clean. At Stellenbosch, in the Cape Colony, there are groves of large oak and magnificent camphor trees; so there might be in South Australia, if the settlers would but procure a few thousand saplings and plant them, as the climates and soil are similar in both countries. A town should have numerous and extensive well-planted gardens and orchards in every part, so that when viewed from a church-tower or neighbouring hill, the prospect would be charmingly picturesque, as it is at Uitenhage in South Africa: moreover, each garden should have a tall kiosk or minareted summer-house, where the females of the family might frequently enjoy their needle-work in rural retirement and delight. When a town is situated near a river, the gardens and orchards could be fertilized by small channels made with clay or brick and cement (twelve inches wide by fifteen inches deep, as in Bengal and at Madras), leading the water from the upper parts of the river or lake. At Graham's Town a small river flows through the main street, performing

the part of the Indian canals in watering the orchards and gardens with which that town is intersected. Wherever there are hanging woods or any beautiful and romantic feature in the scenery, the inhabitants should invariably and immediately petition the local government, that such woods might be preserved for ever, and never be cut down: such is the superb and beautiful scenery at Somerset in South Africa. Each house might have an allotment of ground at some distance from the town, of several acres, to be laid out in vineyards, and divided by aloes, quince, lemon, and pomegranate hedges, as at Graaf Reinet. The streets at this latter place are planted with rows of standard lemon and orange trees, which thrive luxuriantly, and give to the town a fresh and pleasing appearance; and so might the Australian towns have their rows of lemon and orange trees, watered by numerous small channels and canals from the nearest river, reservoir, or bowery, or well, each inhabitant receiving his due portion of the vivifying stream at a regular hour, exactly as they do at Graaf Reinet from the Sunday river. The banks of the Gariep river, in Africa, are lined with fine willow trees, bending gracefully over the stream, and I should think that this useful tree would thrive as well in Australia.

The culture of the vine should be a popular and even a national occupation in Australia, and the inhabitants of every town and village, hamlet and single cottage, should consider it part and parcel of their inheritance, and their staff of life. Five thousand vines, cultivated after the gooseberry-bush fashion, in rows, may be planted on one

acre of ground, and will yield five pipes of wine (760 gallons), the wholesale price of the pipe being forty pounds sterling. At Constantia farm, in South Africa, the vine is supported on frames raised a few feet above the earth, or (as in India at some places I visited) on lofty trellises over the walks in gardens, supported on square pillars of masonry, eight feet high, along which they extend in luxuriant richness. At the Cape there is a fine large white Persian grape, called henapod or cocksfoot, which yields a delicious but expensive wine, but this grape being fleshy, is more generally planted for the purpose of being converted into raisins. The vine thus trained on tall frames, overspreading the walks of the gardens, surrounding the flat-roofed white-washed country-houses of the respectable small shop-keepers in the vicinity of a town, enhances greatly the beauty of the landscape, and brings to one's recollection that little paradise the island of Madeira.

In Picardy, now the Department du Nord, in France, the roads in many parts are lined with tall standard apple trees, healthy and beautiful to the sight: I have seen them loaded with large red apples, with which the proprietors make their celebrated cider. The soil is sandy and rocky, even ankle-deep in loose sand, which seems to agree with the trees: but if travelling through these avenues of rosy fruit trees was delightful, I was no less astonished to learn that the people are so scrupulously honest, that they never steal the lovely and inviting fruit; neither would my mentor allow me to gather one or two of those fallen on the ground, although I begged hard to be allowed

to descend from the cabriolet for that purpose, a very good lesson on self-denial for a youth. Let the Australians also line their roads with fruit trees, standard peaches and apricots, and other sorts that may suit the soil; also here and there a few Indian banyan trees (*ficus indicus*) for shade for the traveller. The *Education Journal* contains the following anecdote on gratitude:—"A very poor aged man, busied in planting and grafting an apple tree, was rudely interrupted by this interrogation: 'Why do you plant trees, who cannot hope to eat the fruit of them?' He raised himself up, and, leaning upon his spade, replied 'Some one planted trees before I was born, and I have eaten the fruit; I now plant for others, that the memorial of my gratitude may exist when I am dead and gone.'"

PRIVATE DWELLING-HOUSES.

However beautiful and ornamental a building may be, and however pleasing to the eye exterior uniformity, a builder should always attend to the wants, necessaries, conveniences, and comforts of life, in preference to either ornament or uniformity; but as it is possible to blend one with the other, and to unite, in the same building, just proportions and suitable arrangements of rooms and offices, with exterior convenience and taste, the following observations are here offered, for

the consideration and use of the wealthy classes of Great Britain and the Colonies.

Situations in the country for building on should be free from the danger of floods and inundations, either of rivers, lakes or mountain-torrents. They should be free from the danger of falling rocks or avalanches from the precipitous sides of hills, as well as from the risk of great storms bringing down large trees. They should, if possible, be far from unhealthy swamps or marshes, and, if possible, should always stand on slight and easy eminences, but not away from fresh water, unless the locality admits of sinking wells.

Foundations to build upon, whether natural or artificial, should be well considered before commencing, as well as the quality, quantity, value, and distance of the materials, such as lime, stone, brick, tile, timber, slate, sand, earth, chalk, clay, metals, &c.

Having fixed on a spot, and examined it with care as to soil, situation, and timber, the person intending to build (as well in the Colonies as at home) should weigh well its localities before purchasing, and then be equally careful in deciding upon the situation for his house, which ought to be upon a dry soil and elevated situation; as near as possible, also, to the road or water communication, if there be any; above all, a healthy situation is to be preferred to a few miles' distance. In some parts of North America, it is astonishing how many days' labour are lost to a settler by actual sickness; indeed, salubrity of situation should be preferred, even at some expence of fertility or proximity to a market. A slight elevation,

if attainable, is highly useful in admitting a good cellar to be dug under the floor of the house, which is a matter not to be forgotten, as malt-liquors never keep well above ground. At any new settlement in Australia, a temporary dwelling or log-house might be erected for the family, until the larger house be completed. The log-house can be covered with bark, which is taken from the adjacent trees, and two stout men will effectually do this in two weeks, so as to render the family tolerably comfortable. A common shed, also covered with bark, can be formed of poles in half a day, to screen them from the sun, and will also be found sufficient protection from the rains in that fine climate, for the short period of a fort-night.

FOUNDATIONS.

As firmness of foundation is indispensable, wherever it is intended to erect the building, the earth should be pierced by an iron bar, or struck with a rammer, and the loose and soft parts of the soil must be excavated, until the settler arrives at a solid bed, capable of sustaining the walls, &c. Large slabs of stone, if procurable, should form the first layer, and this lower bed of rough stones should project about a foot from the face of the wall on each side, and on this bed one or more courses of stone may be laid, and then the wall may be commenced and carried up to the level of the top of the trench, where the breadth of it may be diminished to the thickness of the intended walls above ground; that is, the foundation-wall must project several inches on both sides the upper walling.

PRIVATE DRAINS.

No house, however humble, should be built without first forming drains; this should be done at the time of laying the foundations. The drains should always be twelve inches wide and eighteen inches deep, the covering being of thick oak, teak, iron-wood or any other tough wood, slabs or stone, and never arched with bricks, which are always liable to be burst in, the bricks rotting under ground sooner than oak and other hard woods. Drains, of the foregoing minimum dimensions, may be made at any depth, provided they be not lower than the bottom of the foundations of the buildings. Drains should invariably be carried *entirely round* a house, both within and outside the walls: those *within* should circumscribe the floors at about six or eight inches from the wall, and need not be more than a few inches below the floor. The *outer drains* should circumscribe the house at about two feet from the walls, and their depth under the surface of the ground may be adapted to the circumstances of the surrounding grounds, and the fall or slope of the country; and although not lower than the foundations, yet they should always absolutely lie deeper than the inside drains.

An outer series of very deep drains, and of larger dimensions, say seven feet high, by three feet wide, should always be carried round a pile of buildings or row of houses, at the distance of thirty or forty feet from them, and lying deeper under the surface of the ground than the smaller drains, to receive the water from the latter, and to

prevent them from sapping the foundations and surrounding ground. Indolence and recklessness may disregard this advice on draining; but comfort, health, and cleanliness, will deem them of great importance; therefore, when men undertake to build permanent dwellings who cannot afford these primary operations, they had much better not build at all.

MORTAR.

In Southern India, the Hindoos make their mortar of shells gathered on the sea-shore, and with or without sand, it is the hardest mortar in the world: they call it Chunam. The colonists of Australia might copy the Hindoos in this branch of the domestic arts with advantage; and they would do well to import a few shell-pickers, lime-burners, chunam-beaters, and native bricklayers, to teach and improve them in these trades.

Whether mortar be made of stone-lime or shell-lime, it should never be made with sand from the sea-shore, unless such sand has been previously washed in a stream of clear fresh water, and divested of its saline particles: nor should mortar contain any proportion of clay or mud. The general proportions given by the London builders, for making mortar, are, one-and-a-half cwt., or thirty-seven bushels of lime, to two-and-a-half loads of sand. Dr. Higgins has given the following proportions:—lime, newly-slaked, one part; fine sand, three parts; and coarse sand, four parts. The more the mortar is beaten, the less proportion of lime suffices. On the Coromandel Coast, the builders employ great numbers of women to pound

the mortar in stone troughs, with heavy rammers, five feet long, and as thick as a man's arm, as the author often witnessed, and the mortar is afterwards as hard as stone.

BRICKS AND STONE.

The mould for making bricks is about ten inches in length, and five in breadth; and the bricks, when burnt, are about nine inches long, four and a-half broad, and two and a-half inches thick: *they would be much stronger, and cut a better appearance, if they were one inch larger every way.* Strength is everything in building.

Stones hewn for the walls of houses should be fourteen inches long, seven inches broad, and five thick, being the most convenient dimensions for handling and walling, and presenting the handsomest appearance.

When building a wall in dry weather, the bricks must be wetted or dipped in water, as they are laid, to cause them to adhere to the mortar, which they would not do if laid dry; for the dry sandy nature of the brick absorbs the moisture of the mortar, and prevents adhesion.

Houses should not be built with red bricks, as they are soft, very porous, and absorb a deal of moisture, and thus render a house very damp.

OUTER WALLS AND PARTITION WALLS.

No person should build, or cause to be built, any house or houses, whether for the rich or the humbler classes of society, in Great Britain, Ireland, and the Colonies, with walls of less than the following dimensions and strength.

Party and external walls should always be of equal thickness.

All the outer walls of any house or houses, whether built with stone or brick, should be cemented with good mortar, and should never be of a less thickness than eighteen inches, if brick, or twenty-one inches if stone, when the building does not exceed in height a ground-floor,—that is to say, has not a story above it. But when there is a story above the ground-floor, the walls should invariably, universally and compulsorily, be made two feet thick. A building of two stories and a garret should have walls two feet and a-half thick, from the ground up as high as the floor of the second story, whence it may be diminished in thickness. Buildings of three, four, and five stories, with attics, should have walls three feet thick up to the floor of the first story, two and a-half feet thick from thence up to the floor of the second story, two feet thick from thence up to the floor of the third or fourth story, and still more diminished above. The foundation-walls of every building according to the foregoing dimensions, should also be proportionally thicker under ground (by projections of one foot, two feet, &c.) than the walling above ground, and should be of a sufficient depth to ensure stability and safety.

Partition-walls inside a house two stories high, should never be less than ten inches thick up to the upper floor, which, if built with brick, would be as thick as the length of a brick, with half an inch of mortar or wainscot on each side. For houses more than two stories high, the partition-wall on the ground-floor ought to be at least a

brick and a half thick, or even two feet thick. I know that these dimensions are not agreeably to the present fashion and rage for doing everything on the cheapest plan; but I would abolish cheap estimates and cheap plans. Let cheapness be no longer the guide and moving spring of contractors, builders, and owners of property: strength and comfort should be their everlasting maxim. A house with thin partition-walls is sure to shake, and I have seen some new ones absolutely dangerous. By party-walls, I mean those that divide house from house, and by partition-walls, I mean those that divide the chambers and passages in one and the same house.

SHAPE AND SIZE OF ROOMS.

With regard to the internal divisions of a dwelling-house, utility requires that the rooms be rectangular, to avoid useless spaces. An hexagonal figure leaves no void spaces, but it determines the rooms to be all of one size, which is both inconvenient and disagreeable for want of variety. Though a cube be the most agreeable figure, and may answer for a small room, yet in a very large room, utility requires a different figure. Unconfined motion is the chief convenience of a great room: to obtain this, the greatest length that can be had is necessary; but a square room of large size is very inconvenient, as it removes to too great a distance from the hand, the chairs, tables, &c., which, when unemployed, must be ranged along the sides of the room. Utility, therefore, requires a large room to be a parallelogram or oblong-square. This figure is likewise best calculated

for the admission of light; because, to avoid cross-lights, all the windows ought to be in one wall; and if the opposite wall be at such a distance as not to be fully lighted, the room must be obscure. The height of a room in England exceeding nine or ten feet, has little relation to utility; and *proportion* is the only rule for determining the height when above that number of feet.

In houses consisting of only two or three rooms on the ground-floor, and the same number above, the ground-floor rooms ought never to be less than nine or ten feet high; and the story above never less than 8½ or nine feet high; and no room in any small house or cottage, however humble, should be less than fifteen feet square, and nine feet high on the ground-floor, nor less than eight feet high in the story above.

In large houses, the height of the rooms should be proportioned to their length and breadth, whenever the rooms are all of the same size; at least, the principal rooms should be so. For example, the proportions of a room, the height of which is sixteen feet, should be twenty-four feet broad, and thirty-six long; but as such a height is scarcely ever attainable, and seldom necessary in a private dwelling, in the cold climate of England, (it may do well in Australia,) I shall give the following proportions of rooms, the story being the standard for the ground-floor.

The height being	9½	feet,	it should be	15 feet	long by 15 ft. broad.
Ditto	,,	10 do.	,,	18 do.	by 15 ditto.
Ditto	,,	10½ do.	,,	20 do.	by 15 ditto.
Ditto	,,	11 do.	,,	24 do.	by 16 ditto.
Ditto	,,	12 do.	,,	30 do.	by 20 ditto.
Ditto	,,	13½ do.	,,	36 do.	by 20 ditto.

It should be	18 feet	long by	18 broad	When the height of the story is eighteen feet.
„	27	„ by	18	
„	30	„ by	20	
„	33	„ by	22	
„	36	„ by	24	
„	54	„ by	36	

An *entresol* on the first story may be necessary sometimes.

A room 18 or 20 feet long, and only 14 feet broad appears narrow and confined, and is found to be very inconvenient; indeed, the practical inconvenience of such a width has frequently been witnessed by myself, and I therefore lay it down as a universal rule that the minimum breadth of any room should be fixed at fifteen feet.

VERANDAHS, OR PIAZZAS.

In columns and pillars for piazzas, verandahs, porticos, &c., the proportion between the height and thickness of the pillars varies between eight diameters and ten, and every proportion between these two extremes is agreeable. The intervals between columns may be seven diameters, or more if necessary.

A verandah is so useful and so delightful a part of a house, that I shall say no more than strongly to recommend settlers in Australia never to build a house without one. A verandah or piazza should never be less than seven feet, nor more than twelve feet wide. Every house in England ought to have a verandah.

DOORS.

The outer or entrance-doors of a dwelling house, should never be less than seven feet high and four

feet wide; the inner doors should never be less than six feet six inches high and three feet six inches wide. I am acquainted with one tall gentleman who has had some very severe blows on the top of his head from passing under low doorways: and thousands have suffered in similar way.

The ground-floors of a house should not be more than six or eight inches above the level of the ground outside, nor should there be more than one step to the entrance-doors. Palaces and mansions are exceptions, and would look ill without grand flights of steps. All the floors of the several rooms in a house should be on the same level, and a large house entirely on the ground-floor, and without stairs or upper rooms, is preferable to one with stairs and upper stories. Many large bungalows in India contain a great many rooms, all on the ground-floor, and they are certainly more convenient and delightful than the storied and staircased houses of England. Stairs are a necessary evil in cold climates. I reckon that one million of women and girls have been burnt to death, and one million of old men have broken their necks owing to staircases. The palace of one of the petty sovereigns of Rajpootanah, in India, being rather an extensive building and having an upper story, is yet without staircases, their places being supplied by *gently inclined planes.*

WINDOWS.

The size of windows ought always to be proportioned to that of the room they are intended to

light; for if they are not large enough to convey light to every corner, the room must be unequally lighted, which is a great deformity and inconvenience. In very large rooms, a greater number of windows should prevent the necessity of making them of a disproportionate and overgrown size.

The dimensions of the smallest windows in the rooms of private houses, however small such houses, should never be less than three and a-half feet wide, and from five and a-half to six feet high; but in large and lofty rooms, the windows may be four, five, and five and a-half feet wide, and their height should be double their width whenever the height of the ceiling admits of it. These dimensions are proper for houses of any size in England, and are also suitable to the Southern Colonies. When they are larger, they admit too much of the cold air of winter.

Much has been said of late years on the advantages, both to health, and for the sake of air and light, of carrying windows up to the ceilings of rooms. It is believed that a great deal of impure and unwholesome air is constantly circulating and confined within a room in all that space between the ceiling and an imaginary horizontal line drawn from the tops of the windows; and I would recommend that all windows be made as high as the ceiling, so that in a room twelve feet high, the windows should be nine feet high, and this is on the rule that all window sills should be three feet from the floor, which is the most convenient height for a person sitting in a chair to see over. Both upper and lower sashes should be made to open.

The breadth of windows in all the stories should be the same, but the different heights of the stories make it necessary to vary the heights of the windows in each story likewise.

For example, a house consisting of two stories above the ground-floor, if the rooms of the latter are twelve feet high, those of the first story should not be less than nine feet, and the second story or attic should not be less than eight feet. The window sills being three feet above the floor in each story, the windows should all be carried up as high as the ceiling in each story.

Leaden casements for windows have such a poor, mean, and miserable appearance, that they should be abolished, except for the gothic windows of churches. Leaden casements, indeed, are fit for nothing else than gothic or pointed arched windows, as they do not admit the light so freely, or permit so clear a view through them as the larger panes of glass in sashes; it is for this reason as much as their poverty-struck appearance, that they are unsuitable for the rooms of a dwelling-house, unless such house be built in the gothic style, and has window cases with pointed arches; and even then, I wish the inhabitant joy of his gothic windows, for they are, to my mind, the most cold, uncomfortable-looking, inconvenient apertures that could be invented, let alone their noisy rattling in the wind, the impossibility of cleaning them or keeping them clean, their obstruction of view, and their small openings even in the hottest weather, when every other house with sashes has the sashes opened as high or as low as they will go, for the sake of air.

When men begin to improve in their plans of building houses, they must give up the leaden-casement fashion in the churches, and adopt good sized sash-windows.

The minimum size of a sash-window, should have four panes of glass abreast, each pane thirteen inches by nine; and I will venture to believe, that one such sash-window would afford as much light as two leaden casements of the same size.

Of all the taxes that were ever invented by one man to annoy another, I consider the window-tax the most atrocious. What right has one man, two men, or any body of men to tax the air we breathe, the water we drink, or the light of day, elements and blessings received immediately from the hand of God,—the immediate and spontaneous gift of a bountiful Creator to all men, without distinction of caste, colour, wealth, or poverty? That Legislature which first imposed the window-tax, certainly stepped beyond its duties, and played the part of a tyrant. The nation did not dream that its representatives would invent and inflict so obnoxious a tax as the window-tax, but it was taken by surprise, and was not at that period sufficiently alive or awakened to the evils of such a tax. Why did not that same Legislature impose a tax on the air we breathe, and appoint commissioners and inspectors to measure the capacity of every man's stomach to know how many cubic feet of air he consumed daily, that it might be taxed? The Legislature dared not do such a thing, but it dared to inflict the punishment of darkness in the houses of British people, without

their having committed any crime deserving the privation of such invaluable and inestimable blessings as light, air, and health ; for the building up and closing of many windows rendered thousands of houses, stairs, passages, and rooms, unhealthy and obscure. Many substitutes for the window-tax might have been found,* especially taxes on pernicious luxuries, pernicious customs, and pernicious negligences. A good swinging tax on gunpowder, hunting and racing horses, and dogs, would do away with some cruelty, and be productive of more revenue. It is bad enough to tax our ale and porter, our shoes and candles, our paper and bricks, and our timber and glass; but to tax the light of day was the tyranny of a madman, and the cruelty of a tyrant.

CHIMNEYS AND FIRE-PLACES.

It is usual to build chimneys in England so that the jambs of the fire-places project some eight, twelve, or fifteen inches into the rooms, forming a niche or recess on each side, which is the worst possible custom, as it regards comfort, that can be persisted in. In a large family, during the winter, some of the members are necessarily obliged to sit shivering every day or evening within these recesses, hid up from the sight or enjoyment of the fire , or if it so happens that the niches are filled up with a bookcase, a chest of drawers, or a cupboard, woe to the person who sits near it, for there are constantly drafts of cold air blowing a gale from every crevice of the closet or cupboard,

* All articles of gold, silver, copper, and brass, whether for use or ornament, might be taxed ;—and a very rational tax too.

causing rheumatic pains in the shoulder, the neck and face, and also ear-aches.

The mantel-piece and fire-place should therefore always be built in a line with the wall, say within the wall itself (causing the chimney-flue to project at the back of the wall), which would abolish the necessity of jambs and recesses, and enable every person to see and enjoy the benefits of the fire. The grate or stove should not be placed too forward (as is now so universally the fashion), but should stand *exactly under the flue*, which would cause the smoke to ascend it easily, actually attracting a draught up it, and preventing the room from being, what is commonly thought, a great nuisance—"a smoky room"—an inveterate enemy to ladies' beautiful lace caps and dresses. Stoves or grates should no longer be made with straight bars: they should, for the future, all be made with elliptical bars, flattened or straightened a little in the centre or middle of the bars. Straight bars should be abolished in grates.

Stoves and grates with *hobs* are far more useful and comfortable than without, in spite of gentility and fashion, but more especially in the humbler dwellings of the majority of the nation, and a fire-place should never have a less width than three feet five inches, which should be the minimum, and would always admit of a good stove grate with roomy hobs.

The fixed height of *all* fire-places should be three feet nine inches. The width of a parlour fire-place should be three feet five inches, and that of a kitchen and labourer's cottage fire-place should be four feet. Height of the hobs of a stove-grate

from the ground should be two feet. The bars should be eighteen inches wide, and ten inches to the back.* And, in defiance of fashion, a mantel-piece should be fixed at the height of five feet six inches. I give the foregoing as the best measurements of a comfortable family fire-place.

As for cupboards, no private house should be without them in every common sitting-room or bed-room, and much less the cottage or house of a poor man, to whose family, a cupboard is indispensable: but cupboards should be formed by boarded partitions at that end of the room the farthest from the fire-place, and thus no seated person would have to be disturbed every day, every evening, and every moment by others resorting to them.

The Act of Parliament, passed in 1834, for the better regulation of chimney-cleaners, and for the safe construction of chimneys and flues, contains the following clause: — "And whereas it is expedient that, for the better security from accidents by fire or otherwise, an *improved construction* of chimneys and flues should hereafter be adopted; be it therefore enacted, that all withs and partitions between any chimney or flue, shall be built or rebuilt with brick or stone, and at least equal to half a brick in thickness (this is not thick enough. What is half a brick?); and every breast, back, and with or partition of any chimney or flue, shall be built of sound materials, and the joints of the work well filled in with good mortar or cement, and *rendered* or stuccoed within; and also that every chimney or flue, hereafter to be

* These are my *minimum* dimensions of stove-grates.

built or rebuilt, *in* any wall, or of greater length than four feet *out* of any wall, not being a circular chimney or flue of twelve inches in diameter, shall be, in every section of the same not less than fourteen inches by nine inches (I consider this minimum too little: it ought to be eighteen by twelve); and no chimney or flue shall be constructed with any angle therein which shall be less obtuse than an angle of 120 degrees, and every salient or projecting angle in any chimney or flue shall be rounded off four inches at the least; upon pain of forfeiture by the owner of such chimney or flue, of the sum of 100*l.*, to be recovered, with full costs of suit, by any person who shall sue for the same in any of His Majesty's Courts of Record at Westminster. Provided nevertheless, and be it enacted, that nothing in this clause shall be construed to prevent chimneys or flues being built at angles with each other, of 90 degrees and more, such chimneys or flues having therein proper doors or openings not less than six inches square."

I entirely disapprove of this new fashion of *rendering* or stuccoing the inside of flues or chimneys, because the mortar will, from various causes, be always crumbling and falling down, thus leaving the insides of the flues, rough and full of holes. The minimum size of flues should be eighteen inches by twelve, and instead of finishing them with that useless operation *plastering*, they should be at once built with good smooth bricks or stone, invented for the purpose, and the joints very close and well pointed with cement; and they would then endure a thousand years.

Chimneys should never be built back to back,

as this custom is one of the principal causes of their smoking.

STAIRCASES.

The staircase of any house or cottage, however humble, should not be less than four feet wide: this should be the absolute minimum width. The breadth of the steps should never be more than fifteen inches, nor less than twelve inches; and the height or depth of each step should not be more than five and a-half inches, nor less than four: there should be no cases requiring exceptions to this rule.

"When the height of the story is given in feet, and the height of the step in inches, throw the feet into inches and divide it by the number of inches the step is high, and the quotient will give the number of steps required."*

It is a general maxim, that the greater breadth of a step requires less height than one of less breadth: thus, a step of twelve inches in breadth will require a rise of five and a-half inches, and a step thirteen inches broad, requires a rise of five inches, which may be taken as a standard, to regulate those of other dimensions.

The best light for a staircase is a sky-light, but when a sky-light cannot be made, the stairs should at least be lighted by a window, however small, and not be in darkness, as is too often the case in small houses. Stair windows should be exempt from taxation.

Stairs should always be built of stone, if pos-

* Nicholson's Builder's Practical Guide.

sible, or of slate, an excellent material for the purpose, or of large strong earthenware tiles, supported on brick walls. In case of fire, wooden staircases have been known to be burned first, and cut off the retreat of the unfortunate inmates.

It is a very general custom in England to build the staircase of a poor man's house in the room on the ground floor in which the family resides, a custom which cannot be sufficiently condemned; for the smallness of the room is the universal complaint, and when it is considered that the stairs, narrow, straight, steep, and dangerous as they generally are, project from the wall about three feet into the room already too small, and extend to the length of eight or ten feet along one side thereof, it must be admitted by every generous and considerate mind, that such a plan materially trenches on the comforts of the dwelling-room. The stairs, it is true, are generally hid by a partition and shut up by a door, besides having a cupboard under them, but these additions are no excuse for taking off a single inch from the size of a small room. I consider it a bad custom to build a staircase in any room, even if the room be of ever so large a size: thousands of poor families in the country, are obliged to have a press-bed (a bedstead that shuts up) in the ground-floor room, and there can be no privacy or comfort in sleeping there when the staircase opens into the room. Next to this stingy plan, I find fault with another which is quite as bad, namely, nearly all the poor people's houses in the kingdom, have the outer-door opening directly into the very room in which they sit. Let the winter be ever so severe, the

scarcity of wood, peat, or coal, ever so pressing, or the season ever so sickly, yet no person can go in or come out of a poor man's house without the constant and frequent action of this wind-valve (an outer-door to what ought to be an inner part of the house), letting the warm air escape and admitting the freezing winds. There is no comfort in this stingy plan. If the houses of the middle classes have their entrance-passages and halls, and if they deem them necessary parts of their dwelling, conducive to convenience and comfort, why should not the poorer classes also be allowed to participate in them? I have recommended the universal adoption of more liberal dimensions for rooms and stairs, and I wish I could persuade landlords and builders, for the future, to build a passage (or entrance-hall or ante-room, call it what you please) in every cottage, and in every house in the kingdom, which passage should *not be less* than six feet wide, the staircase to be built in it, and the dwelling-room-door and outer-door to open into it, a window being made over the latter to afford light.

ENTRANCE-HALLS.

No respectable house should be built without an entrance-hall, communicating with a central hall, of thirty feet long, by twenty broad, the latter open to the roof, lighted by a skylight, and having galleries five feet wide, all round it on every story, in which family-pictures and other paintings could be hung; and all the doors of the several bedrooms opening into the galleries. This is the noble plan of the interior of a monastery at Goa,

which I visited; and I have seen one, and only one private house in England like it, and a very comfortable, convenient, and noble appearance it had, I may say delightful. (The central-hall, or quadrangle of the monastery was of an immense size, open to the sky, having no roof, and the gallery ten feet wide, covered by a verandah, into which all the doors of the numerous cells opened;—an admirable plan for a college or university in Australia's fine climate.)

FLOORS.

The ground-floors of all houses and cottages, as well as the first-story floors, should be made with stone, if that material be procurable. So frequent are the occurrences of fires, and so dreadful are the losses of life therefrom, that landlords and builders are severely to be blamed for making wood-floors when stone can be had. In Western Yorkshire, the quarries of fine sandstone, or free-stone, are innumerable, indeed, nearly the whole country in the neighbourhood of Blackstone Edge consists of that rock-formation, and the natural consequence is, that nearly all the ground-floors, and many of the first floors of the houses in the West Riding are formed of excellent stone. A description of the floor of a small parlour will serve to explain the plans of all. The room is nearly fifteen feet square, a beam one foot thick crosses it in the middle, on which the ends of six fine slabs of sandstone are placed close together, three on one side and three on the other, their outer ends resting on the walls, into which they are inserted, about six inches, (they are laid down

when the walls are built up to the required height of the floor). The stones are each eight feet long, by five and a quarter broad, and five or six inches thick. The small number of crevices between the stones are neatly filled up with fine mortar; and such a floor will last a thousand years, requiring only one new beam at very distant intervals of time. Here is no danger of fire, only one timber is required; and being covered with a carpet is just as comfortable as a boarded floor. It is smooth enough to dance upon, it is cool in summer, warm in winter, and is sooner and easier cleaned than a boarded floor, and is moreover not liable to certain kinds of insects and vermin, as the former is.

There are innumerable hills of sandstone-formation in various parts of England, so that there is no excuse for not having all the houses in London, and other cities and towns, built with stone floors. Only six stones six inches thick, suffices for a room fifteen feet square; and even if they had to be fetched two hundred miles (from Blackstone Edge to London,) it ought to be done. Distance and expense ought to be scorned in objects obviously calculated for the comfort and safety of human lives.

In laying the beams and joists of boarded floors, the utmost care should be taken not to insert the ends of the timber into the wall too near the chimney flues, and still more care to let no joist go through the wall at the back of a fire-place; for with all a bricklayer's care and attention to fill up well the interstices between the bricks with mortar, yet there will occur many rough places and small holes, into which the smoke and soot penetrate, and when this ignites from chance sparks or other

accidents, it will go on insidiously smouldering within the wall till it reaches the end of the dry wood, setting the latter on fire, unknown to anybody in the house, and in this way thousands of houses have caught fire. An instance occurred within my own observation, of a joist, which the builders had negligently inserted through the wall at the back of the fire-place, catching fire, and communicating to a wooden staircase, which was much burnt, and would probably have occasioned the loss of life had the occurrence taken place in the night instead of the evening.

Large slabs of slate, six inches thick, would make capital floors for upper stories, especially if supported on iron joists.

ROOFS.

Sloping roofs generally consist of the following pieces of timber:—

Beams, called *tie-beams*, extending from wall to wall, horizontally. *Principal rafters* of the roof, fastened in pairs by the tie-beams, every two opposite rafters being connected by one tie-beam: the use of them is to prevent the walls from being pushed outwards by the weight of the roof.

Purlines are horizontal timbers, notched on the principal rafters.

Common rafters are thin pieces of timber, placed at equal distances upon the purlines, and parallel to the principal rafters: upon the common rafters are nailed the boarding to which the slates are fixed; or the splines and laths, to which the tiling is fixed.

Pole-plates are pieces of timber resting on the

ends of the tie-beams, and supporting the lower ends of the common rafters.

A vertical piece of timber, called a *king-post*, standing on the middle of the tie-beam, supports the ridge of the roof; and an oblique piece, called a strut or brace, framed below into the king-post, and above into the principal rafters, supports the latter, and prevents them from bending in with the weight of the tiling.

Pieces of timber, called *wall-plates*, are always to be laid on the walls of a house previous to the laying on of the roof, in order to distribute equally the pressure of the roof, and to bind the walls together.

The pitch, or angle of slated roofs at Goa, in India, (where it pours incessant and very heavy torrents of rain during the monsoon,) are generally four-sixths or five-sixths of the span, and some of the private houses of the wealthy are even more steep, and almost resemble the small spires of a country-church, and are admirably adapted to carry off the rain-water with velocity.

The height of roofs at the present time in England, is rarely above one-third of the span, and I take the liberty of saying, that the slope of such roofs is not steep enough; for, whatever the consequences of "sliding snow stopping up the gutters, and overflows of water from heavy rains," there would neither be so many leaky roofs, nor so many accidents to tiling, if they were more steep. And as to making the slopes of roofs different, according to their materials, I see no necessity or benefit in making such differences: the inclination of a roof to the horizon, whatever the covering may

be, whether of large slates, ordinary slates, second slates, plain tiles, or pantiles, ought invariably to be at forty-five degrees, or one-half the span. I have suffered a good deal in the course of my life from leaky roofs, and it has been a constant observation with me, that *the steeper the slope of the roof the drier the house.* The best materials of the best roofs are liable to leak, if heavy and continued rain cannot run off quickly; and when a tiled or slated roof is almost flat, the water is sure to penetrate by being blown under the slates by the wind.

The generality of gutters along the eaves of roofs are much too shallow and too narrow: they might in all cases be made at least twelve inches deep, and the same wide, without presenting any unsightly appearance. And when houses have parapet-walls, the gutters might be of double these dimensions.

No house in the country should be without gutters, as experience proves that where there are none, the walls of the rooms are damp inside.

I strongly recommend the Australians to have terraced or flat roofs to their houses, in preference to sloped ones. Flat roofs may be made with either copper, lead, or chunam.*

* The *Friend of Australia*, page 270, contains the following note:—"Terraced roofs in India are formed in the following manner; viz. the joists being neatly planed, and moulded at the lower edges, are laid across the house or room, on the top of the walls, with an interval of six or seven inches between each joist, and then a process like vaulting is begun; namely, bricks are laid vertically on their edges, side by side, upon the joists, firmly fixed together with strong chunam (mortar), the same as in turning the arch of a vault, but, of course, without forming an arch; and every crevice

When sloped roofs are required they should be lofty, like those of the Portugueze, at Goa, which are so well adapted to a monsoon climate; but they should also be constructed with extra strength, to withstand the high winds of a warm climate.

In laying joists for flat-terraced roofs, the present method of letting the ends of the joists into notches or mortices an inch or two deep in the sides of the beam must be avoided: the ends of the joists must be placed *upon* the beam, and if they even overlap it, so much the better; and the joists must all be kept in their places and fixed by little pieces of square timber, (exactly the length of the interval between each joist,) placed between each joist upon the beam, which I shall christen with the name of *joist-wedges*. This would be a much better method of laying joists, even for boarded floors in England; for I have seen a whole row of joists which had their ends slipped or drawn out of the notches in the beam in consequence of the wall having warped out of its perpendicular; and but for being held together by the boards, the whole would have come to the ground. Such an accident could not possibly happen to joists lying upon a beam and overlapping it, unless indeed

between the bricks must be carefully filled with mortar. When this first layer (of bricks) is dry and firm, a coat of strong chunam (mortar), mixed with large coarse sand, should be plastered all over the bricked roof, two inches thick, and gradually, *as it dries*, it should be gently trodden firm, and all the cracks closed. When dry, a second, but thinner coat of mortar, say about half an inch thick, should be plastered over the first, and trodden carefully as it dries. A third and last coat, of very fine chunam, or cement, is to be laid thin over the roof, and polished as it dries; which finishes the roof."

the very walls of the house were to fall down: a slight warping of the wall, as in the accident just described, would only affect the joists a few inches, but would not draw them totally off the beam.

COPING STONES.

It is a custom in most countries, to finish the tops of the walls of houses, with a last tire or layer of long slabs of stone, called coping. Having paid a good deal of attention at different periods of my life, to the causes of leaky roofs and damp walls, I discovered, that merely coping the top of a wall or parapet of a house, will not prevent rain-water from insinuating itself into the wall, if the roof or gutter be below the coping. And as it is invariably the case that the gutter and lower edges of the roof, are lower than the top of the parapet, I lay it down as a maxim well worthy of universal adoption, that all house-walls should have two copings; one, some few feet below the other, built into the wall. The following is the process or rule I offer for the guidance of those who will adopt this novelty in building. As soon as the walls are up as high as is necessary for the wall-plates, then lay upon them a tire of sound stone coping, exactly the breadth of the wall, which effectually covering and guarding it from being penetrated by water, the wall-plates may then be laid on this first coping, the roof be finished, and the gutter and parapet be built up, and the latter be finished with the second coping. I defy any rain to get into the middle of a wall finished after this method. "But it will cost more

money," says the builder. Away with such an objection, people should not build if they cannot afford it.

CELLARS.

In recommending that every house and cottage in the kingdom should have an *underground cellar* for coals and beer, I have only one improvement to suggest, viz. that the floors of all cellars should be made on an inclined plane, say a slope of about six inches in twelve feet, which would cause the slop to run down to the lower end where there should be a dish-tile to carry it off into a drain; and thus the floors would always be dry, which at present is very seldom the case. Innumerable robberies of coals occur every winter in the country where the cottages are built without cellars.

FRONT GARDENS.

It is the fashion in civilized countries and especially in Great Britain, to build most of the respectable country houses and villas along the sides of the high-roads, sufficiently back from the road as to be out of the reach of the dust; some standing in parks, others in shrubberies, and many more only a few yards distant from the road, which space is usually termed a Front Court, ornamented for the most part with evergreens and flowers. I wish this custom were more general than it is, for it is grievous to see how many thousands of the cottages of the poor, along the roads all over the kingdom, which have not a foot of ground attached to them, not even a little front court! while on the other hand, it is delightful to see those cottages

which have front-courts; for generally speaking, you see them ornamented with the honeysuckle, the jessamine, and the rose, with sometimes a vine climbing over the door or shading a rural seat: the little divisions of the court occupied by vegetables and the borders with flowers; and in some sheltered corner a bee-hive or two, all these little things affording a rational recreation and a profitable employment to some of the members of the poor man's family. There really should be some compulsory law passed, to force landlords to attach a small piece of ground to *each* cottage in the country after the year 1844, for they will never do it unless they are compelled, uniformly and universally. All ground to be let on building-leases should be obliged to be extended to such a sufficient distance back from the road, as to allow a front court or garden to each house, of at least forty feet in length and as wide as the house it belongs to. I say a *front* garden in preference to a back garden; at the same time, if landlords chose to attach larger pieces of garden-ground to the backs of their cottages they should do so, but *there should still be a front court to each, by compulsion.* It is not wise or politic to give a number of poor men a large piece of garden-ground at a distance from their homes unless they lived in a town; a custom recently obtaining among some of the most benovolent noblemen and gentlemen of the kingdom; because labour makes men thirsty, and in their way homeward late in the evening the said distant garden may make them drop in at some beer-shop where they will run up a debt by the end of each week, whereas, if they had been

digging in a garden *at home*, they would satisfy their thirst with any thing, milk, tea, or water that their homes afforded, and the sight of the beer-shop would not be their temptation.

VILLAGES *versus* SINGLE COTTAGES.

It is a disputed question whether it is better to congregate the poor into villages, or to build for them, cottages all over the country and scatter them in every direction. In my humble opinion, it is better to collect them along the sides of every high road, by building rows of good substantial handsome, comfortable cottages according to the rules here offered, which rows should never consist of more than twelve cottages in a row nor less than two, i. e. no cottage-family should be without a neighbour. They should all have front courts, and if the landlords choose, back gardens also. But rows of cottages should not be carried on in continuity, otherwise it would quite shut out the view of the country from the traveller and lover of nature: they should stand at intervals from each other of four hundred yards, along the sides of the roads, one row on one side the road to face the open interval between two rows on the other side the road, so that every row on either side would stand opposite an open interval, making only a short distance from one pile of houses to the next, which would thus become a means of guarding the roads from the numerous robberies committed on single travellers. It is a bad custom to scatter cottages all over a country, for it is this that has caused every gentleman's estate in the kingdom to be cut up by a thousand different foot-

paths crossing each other in the most disagreeable manner and situation, which, length of time have rendered public property, to the great and everlasting annoyance of every person who buys an estate: not to mention many other obvious objections to a scattered peasantry which I need not name. Cottages should not be built back to back.

But when a country grows too populous, the last resort is to build quadrangular villages for the labouring people at every fourth mile on the high roads, in which the cottages, on my plan, can stand close together, each having its pretty front court and larger back garden. Each village should be built in the form of a parallelogram or open oblong square, their longest sides parallel to the high road and about 500 yards or a quarter of a mile long, and the two ends about 200 yards long the breadth of the square, which would afford sufficient room for a weekly market or annual fair; and the two entrances (there should be only two, one at each end, adjoining the high road which should pass through the village) should have gates or toll-bars to be shut at night, erected under triumphal arches.

CLOACINA.

One of the most signal disgraces, in the present era, to landlords and builders, is the shameful neglect of out-offices for the poor, in most parts of the country. I have seen in my travels in England and in Wales great numbers of cottages without any building for the out-offices, whilst others possess such edifice but without roof or door, and at the same time their condition indescribably

disgusting, and the uncomfortable exposure of my fellow-creatures under these circumstances, is as if all sense of propriety was set at nought and the public feeling to be shocked with impunity,—these wretched buildings being placed in the most conspicuous situations close to the road side and in every public thoroughfare. I would have the law to inflict a heavy penalty on every landlord who builds a cottage without attaching to it a roofed privy with a good door, and a safe, substantial, and *covered* vault or pit, of certain fixed dimensions, say four feet deep and eight feet square; the pit to be always outside the walls. I need not say more on this most digraceful feature of my native land.

CLAY OR EARTH HUTS.

Mud huts or sun-burnt clay cottages (so common in Ireland) should be abolished out of a Christian land. It is a shame to see what pig-styes and worse than pig-styes, thousands of our fellow-creatures are obliged to live in, through their own poverty; habitations in which, neither the rain from above nor the damp from below is excluded; where the light is only admitted from the doorway or the smoke-hole and not by windows; and which afford no shelter from either the heats of summer or the chilling winds of winter. Some legislative enactment should absolutely be passed not only to prevent landlords, owners of land, builders, or any other person, from building any more mud huts, but to compel all who build, to build according to the very reasonable rules and precepts I have laid down so plainly in these

pages. If it be said, as has been said before, that any laws or legislation on the subject of building, would cramp the hand of industry, trench on the liberty of the subject, and prevent very poor builders from the only chance of acquiring property, and so forth, I say *and so it ought*, so long as men persist in customs ruinous to the health and comforts of their fellow men. In the name of patience, what are laws made for, but the greater comfort of the greater number? There is scarcely a man in the United Kingdoms, who has not, who does not, or who will not, make observations and complaints on the "smallness of his rooms" and the great inconvenience thereof, whenever any stranger or visitor elicits the subject. I repeat again and again, that the minimum size of a room ought to be fifteen feet square in any part of the British dominions, and it should be made compulsory by law. It should be fixed. Surely, a room of this size is not too large for a single person to inhabit in the *summer season* in a cold climate; and in the winter should it be considered a cold room, the occupier might have a folding-skreen, which if he pleased, he might ornament with pictures. Small rooms, when inhabited by poor people, are generally nests of filth, dirt, and disease, by reason of the want of sufficient space to remove furniture while cleaning, and every body is in the way of each other. Small rooms and pig-styes for human beings are curses to the health of millions, and therefore this pernicious and stingy custom of building should be driven out of the world by legislation.

GENERAL IMPROVEMENTS.

BRIDGES.

No bridge in the country, whatever its situation, or however small the river, rivulet, or brook, over which it is built, should be of a less total width than thirty feet within the parapet walls; of which space, *it should be compulsory to have a footpath on each side*, of five feet wide each, which would allow the road in the middle to be twenty feet wide. Whether a bridge be built with iron, stone, brick, wood, or rope, is not an object worth half the consideration that the *width* of the bridge is, as it affects the safety of people's lives; for it is disgraceful to the local authorities (of many districts in civilized England, who have the ordering of these matters,) to see the risks of life and limb to which all passengers are liable, and frequently only escape by a "hair's-breadth," when passing narrow bridges, built in remote places, and in the outskirts of towns and villages, in a dark night, from equestrians at speed, gigs, mail and stage coaches, yea, and even from heavy waggons, when such bridges have no footpaths over them. I have witnessed numerous instances of danger on such bridges, and I therefore trust the Legislature will compel the widening of all narrow bridges, and the making of *footpaths* over them, which paths should be paved, wherever stone is procurable.

PLANS OF TOWNS AND STREETS.*

In planning and laying out new towns, the

* For our Australian Colonies.

engineer should be well acquainted with the climate of the locality, and know the quarter of the compass from whence the most prevailing or most healthy winds blow; and in the direction of such winds the *principal, or main* streets should be traced, so that they might be enfiladed by those winds; these main streets should not be of a less width than thirty yards; and they should be planted with standard mulberry trees on each side, when of greater width. The cross streets should intersect the principal ones at right angles, at such distance from each other as to make all and each of the sections of the town a quarter of a mile square, or 450 yards. These cross streets should not be of a less width than twenty-six yards.

Every house ought to have a backyard or court, and every street should have a verandah on each side, in front of the houses, and of the same width as the footpaths, say eight, ten, or twelve feet wide, proportional to the width of the street.

The enjoyment of a verandah is well known in India, and other sunny climates, and would be equally felt in Australia, especially during the mid-day sun of summer, or the torrent of the rainy season; it is also a very agreeable adjunct to a house in England, as those persons can testify who have one.

All churches and places of worship should stand by themselves in the centre, or on one side of handsome open squares, not joined to any other building, but accessible all round; and should not have burial grounds near them, as the latter, in course of years, and at particular seasons, are

known to create an unhealthy state of the atmosphere. Open situations for churches afford an agreeable display of their architecture; but they should not be built in the middle of a street. Burial grounds or cemeteries should be situated at the outer angles of towns upon dry and slightly rising ground, if procurable, and if conducted on the plan of the newly erected public cemeteries, would be a great and universal convenience.

All the entrances to every town should be through a park, that is to say, a belt of park of about half a mile in width, should entirely surround every town, excepting such parts or sides as are washed by a river or lake. This would greatly contribute to the health and pleasure of the inhabitants; it would render the surrounding prospects beautiful, and give a magnificent appearance to a town, from whatever quarter viewed.

Long, *straight* avenues of tress should be excluded from the park, as only tending to obstruct the prospect at various points; the only avenue of trees necessary for equestrians and carriages, should be round the outer circumferential boundary of the park, and of course extending entirely round the park and town. Beyond the park, the villas, country houses, and gardens might begin, and more distantly the farms.

The land of a newly settled country being Government property, there cannot be that objection to the adoption of a regular system for the plans of towns and buildings that there is in an old country; neither can the execution of a system adopted at the beginning be attended with

inconvenience to the public, or be complained of as a grievance by private individuals, which is the case sometimes with modern improvements. It is wise to adopt a system, and when adopted it should be made law, and after it had been enforced a few years it would become custom.

In a warm climate, the roofs of houses should be flat, and not sloped or thatched; the latter are very liable to take fire, and sloped roofs prevent the possibility of enjoying a real luxury, namely—an evening lounge on them during the summer season. Terraced roofs should have an insensible declivity, (or several if the flat roof be extensive,) just sufficient to give the rain water a course, which, falling into pipes, should be conducted into subterranean cisterns, as is the plan in Italy, which would supply the family in each dwelling with water the whole year till the return of the rainy season,

The rafters of roofs and joists of floors should be exposed, and not covered over with stucco, or lath and plaster ceilings; and they should be painted or varnished, to preserve them from the latent attacks of white ants, or being infested by other vermin.

Houses should not exceed two stories high in Australia, which country, like India, is subject to violent winds at the setting in of the rainy season, which endanger lofty buildings. The walls of houses, for the same reason, should never be less than two feet thick on the ground-floor, and eighteen or twenty-one inches on the floor above. A battlement or parapet is invariably formed round a terraced roof, by carrying up the walls of

the house about two or three feet higher than the terrace, and it is strengthened at short intervals by an additional thickness, in the shape of small ornamental pilasters.

A small punkah or swinging-fan should hang from the ceiling of each of the principal sitting-rooms of a house, to be used occasionally to ventilate them during the hot season, and it might be kept in motion by the application of some simple machinery with weights the same as the pendulum of a clock.

All houses in villages and in the rural districts both of the rich and poor, should have a piazza or verandah, round at least three sides; for during the wet season it is a great comfort, and it softens the too strong glare of light in the summer. The roofs of verandahs should certainly be flat or terraced, so that they might serve as an open balcony or gallery round the upper rooms.

Kitchens or cook-rooms should not form part of a dwelling-house in Australia, but they should be separate and detached buildings, consisting of two rooms on the ground, with a terraced roof and a narrow verandah round them: this building, being placed immediately at *one of the angles* of the dwelling-house, and touching the verandah of the latter, would neither intercept any prospect from the windows, nor be at such an inconvenient distance as to cool the victuals during its conveyance from the fire to the table. These two rooms might be eighteen or twenty feet square; one the cooking room, and the other the washing and brew-house. The height of this building should be proportional to that of the house, especially the

chimney, otherwise the smoke might descend into the chambers. The smell of the kitchen in a dry and warm climate, besides many other inconveniences, makes it an absolute necessity to have it a detached building.

Every wealthy inhabitant of Australia should have a bathing-room, and a magazine for grain (wheat) in his house, each about ten or twelve feet square. The bath should be built with masonry at one side within the bathing-room; it should not be less than six feet by three, and three feet deep, and the bottom just above the level of the floor of the room, with a small plug-hole to let out the water; plastered or stuccoed with cement inside, and the water led into it by wooden or lead pipes. Bathing is one of the greatest preservers of health in a warm climate, not to say indispensable; and it is, moreover, a real luxury. The water should be made tepid, or about seventy-seven degrees, if the bather does not find cold water agree with his health.

The natives of Morocco, and other African nations, preserve their wheat under ground in some dry situation, where it has been found perfectly sound after sixteen years' keeping; and as the climate of Australia resembles that of Northern Africa, the settlers in that colony would do well to build a small magazine in their houses, in such a situation as would be safe from damp and from the outer air; it should be a walled room of brick or stone, and well coated with cement within, and the only entrance a trap-door at the top, opening in the floor of another room. This magazine might be ten feet square, and fifteen feet deep;

and here they might hoard their wheat against seasons of scarcity.

To preserve wheat for many years, the atmospheric air must be excluded from it.

PUBLIC SEWERS.

No street or row of houses should ever be suffered to be begun or continued in England without the builder or proprietor also began and continued the public sewer or main drain thereof; and this main sewer should invariably be in front of the houses, and from thirty to forty feet distant from the foundations.

Sewers should be made straight wherever that is practicable, and not curved; and the inclination or fall should be at least one inch to every ten feet.

Main sewers of the first class should be of an oval form, ten feet in height, by seven feet in width in the inside, and they should increase in height and width in proportion to their length and the number of houses they drain, or the quantity of flooded water to be carried off. The crown of the arch and the invert should be two bricks and a-half thick, and the walls should be three bricks thick, and bonded. Wherever the situation will admit of sufficient depth of sewer, there should be from four to five feet of depth between the upper part of the crown of the arch and the surface of the road or street.

Grand streets of the width of one hundred feet should always have two main sewers of the foregoing dimensions along them, and the floors of the sewers should be horizontal, (notwithstanding

any inverted arch underneath,) so as to admit of laying down two lines of temporary iron rails, for two trucks to pass each other in the sewer, when workmen are digging and leading out the mud or sediment.

Second-class sewers should also be oval, eight feet high, five feet wide, the upper arch and lower invert one brick-and-a-half thick, and the walls two bricks thick, and bonded.

Third-class sewers should be oval, seven feet high, four feet wide, and the walls and arches of the same thickness as those of the second-class, and bonded.

All branch sewers from small streets containing less than one hundred houses, should be as high as the height of a man standing upright, and three feet in width in the clear, and bonded.

I would not allow of any other class of public sewers, or any of less dimensions and less strength than the foregoing. I know they will be thought preposterous, and of unnecessary strength, and that the expense will be objected to; but let it be recollected that these works are not temporary affairs; they are wanted for many generations to come; and the stronger they are built, the greater is the firmness of the streets, and the security of the houses from shaking.

The bricks for sewers should be of the hard burnt or almost vitrified kind, and not red bricks; and the mortar one part of strong stone lime, and two parts of clean sand, and very well mixed and pounded.

No situation can be so proper in a city or town, as the centre of every street for its main sewer,

and it should be of sufficient depth under the pavement to drain the lowest cellars of the houses.

Branch sewers should enter a main line by a curved, and not an angular junction.

Every house in a street or row should be compelled to have an under-ground communication with the main sewer, under a heavy penalty for neglect. The law at present provides no means of compelling the builders of new streets to provide them with proper drainage, nor even of enforcing communication with a sewer when made; but it is to be hoped that such a law will soon be made, and that it will be sufficiently stringent to prevent inhuman petty tyrants from undertaking speculations in building, who cannot command these and many other useful improvements.

There should be side-entrances to the main sewers in every street, constructed at regular distances of five hundred feet, and extending to the foot pavement, in which there should be trap-doors for the purpose of enabling men to enter the sewers to cleanse them.

In towns which have rivers passing through them, the filth and sediment of the sewers should not be allowed to run into the rivers, but it should be received into covered pits, made on purpose, at various distances, and be emptied once a-year, if necessary, and sold as manure. Or it should be conducted through a great iron sewer, laid along each bank of a river, and the filth and dirty water could thus be carried a mile or two beyond a town and lower down the stream before it entered a river at all.

In consequence of the dirty habits of the poorer

inhabitants of the city of York, and the culpable negligence of the owners of houses in not having erected a *cabinet* for each house, the river Ouse is almost as filthy as a privy.

RIVERS IN TOWNS.

It should be a standing rule, a standing law of the land by Act of Parliament, that no building of any kind, either public or private, shall ever be built or erected immediately on the margin, or shores, or sides, or banks, of any canal, or river, or piece of water within any town (bridges excepted), whether such canal, or river, or piece of water, or any part thereof, be either public or private property: and that all houses, warehouses, stores, magazines, granaries, wharf-roofs, sheds, or any other kind of buildings, cranes, weighing-machines, &c., &c., public or private, shall never stand near any water within a town, unless such water be a dock, or basin, or an inlet cut from a river.

All existing buildings, public or private, and all manner of obstructions now standing on the immediate banks of all rivers, canals, and waters, public or private, except in docks, basins, or inlets cut from a river or canal, should be pulled down as soon as the present leases and interests in them shall have ceased and expired, and should be rebuilt at a distance of not less than forty yards from the water, if they are to be rebuilt at all: and the sides of all rivers and canals, and the ground along their banks, to the width of the said forty yards, should, if private property, be pur-

chased by government, and be declared public thoroughfare, and belong to the public for ever.

A river-street should be made and paved, along the sides of all rivers and canals within towns; and seats, sheltered from rain, should be placed at regular distances; and wherever any inlet or cut, leads from a river or canal, to any wharf or warehouse in any dock or busin, it should be bridged over for the river-street, high enough for barges to pass underneath, and stairs should be made down to the river or canal at certain distances.

It is unnecessary to point out the many evils and disadvantages to the population in all localities where there is a river or canal within a town, and where the foregoing privilege does not exist (witness both the banks of the Thames all through London, the rivers and canals of provincial towns, the wharf of the Tower of London, the canals of Hamburg during the late awful conflagration, &c., &c.)

Having, in a previous page, touched on this subject, these last observations are intended to apply to every town in the kingdom in which there is a river or a canal.

Docks and Basins should be dug below a town, and not above or within a town, when it can be avoided.

There is another subject, in connexion with rivers in towns, which I shall hint at here. Rivers should be kept as wide as possible from bank to bank, and their navigation should be kept open and the passage free from obstacles, at the same time that very strict laws should be enforced to prevent them from being filled up by that very re-

prehensible custom of throwing ballast overboard, as well as all kinds of rubbish.

Vessels, of whatever size, large or small, should never be permitted to moor in a river, for the purpose of unloading, or loading, or for any thing else, as it is the non-observance of this rule that causes rivers to be blocked up with all kinds of craft, and rubbish being continually thrown from them into the water, imperceptibly but surely, renders them shoal in course of time; and then there is a great expense incurred in deepening them again. A river should be viewed in the same light as a public road or street on land: suppose hundreds of waggons were perpetually stopping and standing in rows or tiers, loading and unloading in the middle of Cheapside or the Strand, what inconvenience, difficulty, and danger there would be for carriages to thread their way through these to streets thus blocked up.

Basins and Docks are the only places where vessels of every size should be suffered to lie, and as this is a maxim that will not be disputed, so also should warehouses and wharfs be removed from the sides of rivers, and be built round basins and docks.

It has been a general remark, for a great many years, that all our rivers are becoming shoal, and that the more shallow they grow as they approach their embouchure into the sea, the higher their streams rise, till at length the waters of some of them are nearly on a level with their banks, and the latter, in several instances, are higher than the general surface of the adjacent land: this is especially the case with the Thames, the Humber, and

some others. The process of filling up will go on till they overflow or break through their banks, and then they will form new beds for themselves, at the expense of the destruction of millions of property. This result may not happen till a distant period, but still it is sure to happen unless a remedy be applied in proper time to prevent it.

Now, I think permanent employment for at least twenty thousand men every year, might be found in the national work of *widening* and deepening all the rivers in Great Britain and Ireland.* If the wages of that number of labourers be fixed at half-a-crown per man per diem, for 365 days, and the superintendence, cartage, tools, and other contingencies be reckoned, an annual Parliamentary grant of one million sterling, would eventually save Great Britain from so great a national misfortune as the filling up of our rivers and harbours.

Neither the officers of the Trinity House nor the commissioners who have the oversight of our rivers, can undertake any great work like that of widening and deepening the whole course of any one river; and it can only be done by a special power and a special grant of money.

FAIRS AND CATTLE MARKETS.

Each town in the kingdom ought to have one or more public fields, for the sole purpose of holding fairs for beasts, toy-fairs, and cattle markets. Horses and cattle are brought into the streets of many towns, and allowed to stand there for sale, to the great annoyance of the inhabitants, and the

* River mud is worth from 7*s.* up to 30*s.* a-load.

covering of the streets with filth and offensive effluvia. How much better it would be if all this business were transacted just outside a town, where there would be space to try the horses, and more room to inspect the cattle, which then need not be crowded together.

Fairs for show and pleasure are also frequently held in market-places and streets of towns; and I insert the following paragraph relating to Huddersfield Fair, as being an example which it would be well if every other town would follow:—"The shows and booths, sights and wonders, were more numerous than usual, and were with much propriety located in the back green, to the gratification of the inhabitants generally, and of those of King-street in particular, who were thus relieved from the noise and confusion usually inflicted on them when such exhibitions were located in the shambles. From seven to eight o'clock on Saturday evening there could not have been less than thirty-thousand persons in the streets and fair."

If show and toy-fairs were everywhere held in an open field or waste piece of ground, outside of a town, it would not only be more pleasant to the townspeople, and serve as an agreeable change and recreation to walk to them; but they would attract more respectable customers, (who dislike the shambles, and markets, and streets blocked up,) and would also afford more space for regular streets of booths, and more elbow-room for the crowds of pleasure-seekers; and during all the rest of the year, the waste piece of ground or field (which should never be less than twelve acres,) might be used as the general public cricket-ground

of the town or village, as well as an archery, if there be a society of archers; and a tall mast should be fixed in the ground, having at its top two or three *yards* or cross sticks, on which twenty or thirty wooden birds should be loosely stuck upon pegs, for the archers to aim at, as is the fashion in France, where I saw a handsome silver vase won by knocking off the bird from the highest point of the mast itself.

PUMPS AND WELLS.

Every house in the kingdom should have a well or a pump in some part of the premises: this is more especially necessary in villages and small towns, where the water is not laid on by pipes, as I have frequently witnessed much scrambling for this necessary article at the few springs and scanty rills, which afford the only supply in some places. Many people have dug for water, and dug deep too, without success, and have given it up as a bad job; I shall therefore, just state the two following facts, which have occurred to my own experience, as they may give some people a useful hint on the subject. A small pond on my brother's farm at Beckenham, Essex, having failed one dry summer, excited a good deal of surprise, as well as inconvenience, as it was always thought to be a spring, and supplied the house with pure water, which could not be had from the large pond. They found it necessary to dig for water in the bottom of the pond, and after digging about four or five feet, came to a bed of strong yellow clay, but found no water; they continued digging till they broke through the stratum of clay

into a bed of yellow gravelly sand, when a flow of beautiful clear water immediately arose in the hole, far superior to what they had before. I do not think the well was more than twenty feet deep.

The other circumstance occurred at a friend's house at Homerton, near London. During the digging for a new sewer at Homerton, the depth of the sewer drew away the water from a well in the garden, and then a pump in the kitchen failed. The well that supplied the pump was in the middle of the kitchen: it was therefore opened, and the men dug five feet into blue clay, where water never resides. They next went to boring, and bored for nine days, still through blue clay, and got water at fifty-two feet. They then dug twenty feet, when it rose about nine feet; but at this stage of the proceedings the depth was too great for the weight of air to let the water ascend. They then dug ten feet across the kitchen to the pump, and were obliged to put down a new pump; the water then flowed as it always had done, though not clear at first; but it improved, and became clear and pure after a little while.

There are many localities where water will be found below a stratum of dry clay, if people would only have the patience and resolution to persevere in digging and boring.

I attribute the failure of the water in the well in the foregoing instance, entirely to the narrowness of the street at Homerton, which necessarily brought the sewer too near the houses, although it was carried along the centre of the street; and

this affords another striking argument in favour of making streets wide.

ROADS AND FOOTPATHS.

I beg to record my earnest protest against repairing streets in towns, and roads, and footpaths in the rural districts with ashes from burnt coals, which is a very common custom in many parts of the kingdom, and especially in places near manufactories and foundries. On a windy day, people get their clothes and linen soiled with black dust, which is also very injurious to the eyes, being of a very sharp nature; but if ashes on the roads in the country are so filthy and pernicious, how much more so they are when used in repairing streets in a town; every breath of wind carries the fine black dust into the houses, and an impalpable powder insinuates itself into every article of furniture and dress, not excepting the insides of chests of drawers, boxes, and trunks; covering the chairs, tables, and stairs with a dust that soils your hands with whatever you touch.

But if the dust of common coal-ashes produces such exceedingly disagreeable consequences, how much more so does the refuse and dross of an iron foundry. In wet weather, every splash of the ferruginous mud fixes iron-mould spots on every article of female dress that hangs around the ankles; and a person walking in white stockings is sure to have them covered with iron-mould.

In dry and windy weather, small particles of iron being mixed with the dust, and assailing the eyes, cause painful excoriations of those invaluable and precious members, and almost blind one for

a little while. I have felt the effects in my eyes for a day or two, after having been well blinded on an iron-dust road; and I once heard of a young man who had some iron-dust blown into his eyes, the pain of which was so excruciating that he uttered incessant shrieks, and went stone-blind.

A penalty of fifty pounds ought to be levied on every person who repairs streets, roads, or foot-paths with coal-ashes, or ashes and dross from manufactories and foundries. One or two severe examples would banish such a reckless custom out of the land.

A penalty of twenty shillings ought to be levied on every good housewife who throws fire-ashes out of her door into any street, road, or inhabited district, as thousands of good housewives do every day.

The surveyors of the highways are, by Acts of Parliament, legally obliged to repair the foot-pavements and footpaths that pass through their several districts. It being, therefore, their duty to keep the foot-pavements in repair, how is it that they suffer gentlemen to ride upon them,—a very common custom in muddy weather, to save their horses or themselves from being splashed? The heavy trot of a horse breaks the flags with which the foot-way is paved, and thus there are always holes and puddles of water at every three or four yards; and well dressed people can neither go nor come from a church on Sunday, without being splashed up to the knees, on a foot-pavement that was purposely constructed for their convenience and protection. And when walking out in a dark night, one is constantly in danger of dislocating

one's ankles, by stepping into a hole where the stone-flag is broken.

Riding on footpaths is so common a custom in country places, and causes so much destruction to the paths and injury to pedestrians, that something ought to be done to put a stop to it.

A fine of 40*s*. levied on every sporting dandy found riding on a footpath (half the fine to go to the informer and the other half to the poor-box), would perhaps put an end to these selfish, or at leas, tho ughtless, practices.

The usual method of forming roads in the country, proves in the end a very expensive one to keep in repair; viz. covering the ground with a crust of macadamized stone, but without any foundation underneath to support it. The consequence is, the roads become rotten in very wet weather or after a severe frost, and if not immediately attended to, are soon cut up into deep ruts.

The only sound plan ever discovered for forming good roads, is to dig out the earth to the depth of three feet and cart it away, then fill up the excavation with broken granite (each piece about the size of a man's head), and having thus laid a foundation as strong as a rock, cover it a foot deep with macadamized stone. Such a road would last for ages, with as little trouble as is now bestowed on bad roads.

Sand-stone is a wretched material for roads, and as granite rocks are within hail of all the railroads, it is a pity granite is not used all over the kingdom.

PRIVATE STREETS.

In every town there are certain streets, courts,

and alleys, that are called private property, and in which, the owners and inhabitants seem privileged to do as they please, by keeping them in a filthy condition, their pavement out of repair, hanging ropes across them; and sometimes their selfish independence carries them so far as even to erect gates at the end of a private street for the purpose of excluding the public and preventing the passage of wheeled vehicles through them. No town can be well regulated or said to be under good government where such customs exist. Streets through which there is no public thoroughfare, are an aggravating nuisance in more ways than one, and indeed there had better be no such streets than that people should be prevented from passing through them. Are private individuals to be allowed to build with impunity private streets and private property in such a way as that they shall become public nuisances? Are they to be under the authority of no one who can see that private gain does not run counter to the public good? Private streets are very often very narrow streets, and so long as the minimum width of streets is not fixed by law, and private streets be allowed to be shut up with gates to block out the public, so long will it be utterly impossible to improve the building of towns in any permanent degree; for if a whole town were pulled down and rebuilt on the best possible plan this year, yet it might be spoilt by erecting a number of inconvenient *under-width* streets the next.

Private streets, courts, and alleys, ought to be under the surveillance of the regularly appointed officers and commissioners, in every town, the

same as the public streets; and *street-committees* should be formed to superintend the welfare of all such streets, and persons creating any nuisance and neglecting their warning should be fined.

COURTS AND ALLEYS.

Under the previous head, I have recommended that private streets and all existing courts and alleys, should be equally under the supervision of the town's authorities and Commissioners of Improvements (or Street Committees appointed by the former) as public streets. But the sooner a town can get rid of its courts and alleys the better; and although a law cannot be made to abolish them immediately without some inconvenience to the inhabitants of these retired places, and loss perhaps to the owners of such property, yet a law can be made and ought to be made, to prevent the building for the future of any more courts and alleys in any town or village or hamlet in the British dominions.

One of the causes of the difficulty of improving the plan of a town, and one of the greatest difficulties of keeping up order, health, cleanliness, &c. in a town, may fairly be ascribed to the existence of those pretty little independent kingdoms in a town, called "Courts and Alleys."

If you hear a quarrel between two women, it is sure to be up some court or alley. If you see a fight between two men, it is sure to be up some court or alley. If there is a brothel in the vicinity of any street, it is sure to be up some court or alley in the street. If there is a gambling hell, it is sure to be in some court or alley. If you hear

the fiddle squeaking at noon day, be sure it is a dance of naked women in some den of infamy up a court or an alley. If you hear of a gang of coiners and forgers, they are generally found up some court or alley. If you hear of a poor man's lamb (his daughter) being the victim of a seducer, you will hear it happened in some bad house up a court or an alley. If you hear of a barbarous murder committed upon some unsuspecting youth, it will turn out that he was decoyed to a public house up some court or alley to see some cheap silk handkerchiefs. (This was once a very common crime.) In fact, courts and alleys being retired from public observation are almost always nests of poisonous filth, hiding-places for thieves, and the secluded scenes of vice, depravity, and desperate misery.

Besides; the inhabitants of courts and alleys can never see what is passing along the adjoining street, and this is one reason why so many groups of poor men and women are always standing at the ends of the courts and alleys in a town, staring at the passengers as if they had never seen a man before in their lives.

I strongly recommend, for the good of all classes, that courts and alleys be abolished; and let men live in wide streets, and act openly and honestly in the sight of all.

The authorities of every town should buy up the properties in the courts and alleys, and pull them down.

CELLAR-GRATINGS ON FOOT-PAVEMENTS.

There is scarcely a city or a town in the king-

dom, including the metropolis, where that ugly custom of making cellar-windows across the foot-pavement does not prevail, and a more dangerous one can scarcely be imagined, for in many streets it is positively hazardous for people to proceed along them. In the streets of many towns the foot-pavements are intersected by a series of holes which stretch out from one to three feet, and are often only covered with a wooden trap-door so springy and slight, that it is frightful to walk over them; but the worst part of this nuisance in country towns, is the practice of leaving these apertures unguarded by a grate, and being windows to coal cellars and wine vaults, are sometimes very deep, and one would think they were invented for no other purpose than to act as man-traps to break the legs and necks of honest unsuspecting strangers. Sometimes an unfortunate ox falls into one of these deep cellars, but oftener do we hear of human beings falling the victims of these horrible pits.

So dangerous a nuisance on the foot-pavements should be entirely abolished, and it might be done very easily, as there is not the least necessity for making the entrance to cellars and coal-holes, in the flagging of the footway. Let a small arched recess be made in the front wall of every house that has a cellar, and let the stairs, if stairs be required, be made within the cellar, and not half out and half in, as is the custom at present.

Recesses can be made of every variety of dimensions. If for the admission of pipes of wine, they should be made large accordingly, and have folding-doors. If merely required for men to go

down, they need not be more than four feet high, and three feet wide; and if only a hole is required for the purpose of shooting coals down, it need not be larger than a foot square.

A recess in the front wall would answer every purpose; and holes in the pavement should be forbidden for the future, and entirely abolished everywhere.

STEPS AND SCRAPERS.

Next to the nuisance and dangerous custom of making the entrance to cellars two or three feet across the footway in towns, and the holes to coal-cellars in a similar situation, I have to notice a custom that is almost, if not quite as dangerous,—namely, the projection of door-steps on the foot-path, and the iron scrapers by the side thereof. I am sure that I have read of hundreds of accidents to different people falling over the steps of a door when passing along a narrow foot-pavement in dark nights, and unlucky falls in frosty weather, when many a head has been cut by coming in contact with a projecting scraper.

It is almost impossible to walk some of the narrow streets of London at night, without being in momentary danger of tripping against some door-step in an unguarded moment, when the mind is absorbed with some engrossing subject; and I believe that thousands of people get ugly falls across projecting steps. The custom of planting steps and scrapers a single inch beyond the line of the wall of the houses is so improper, so dangerous and unscientific, that it should be

totally forbidden and abolished throughout the kingdom.

The ground-floors of all houses, not detached mansions, should not be more than six inches above the level of the ground outside, and then there would be no necessity for any steps; or supposing the ground-floor were twelve inches higher than the level of the footway, a couple of shallow steps made in the thickness of the wall within the doorway, would be more safe to the public, and equally convenient to the inmates of the houses. At any rate, steps should be made within the line of the walls, be the floors ever so much raised; and not outside. On this point, private convenience should give way to public convenience and security.

And as to the iron scrapers which now universally stand out from the wall so improperly in nearly all the streets of towns, if a very small recess were made in the wall of each house by the side of every door, the scraper might be fixed within it so as not to project at all, and thus a few of the most dangerous items on the foot-pavements of towns and villages might be got rid of; and the best way would be to compel the riddance by a legislative enactment, which might embrace many other useful regulations.

NAMING STREETS AND NUMBERING HOUSES.

One of the most tantalizing customs to a stranger that prevails in most towns, is that of naming more than one street or locality in the same town by the same name; indeed, the practice in London

is carried to such an absurd length, that three and four streets in different parts of the metropolis are called by the same name. This, I say, is sufficiently tantalizing; but there is another custom, or negligence, equally, if not more provoking, and that is, the total omission of the name of a street on the corner-houses of the street, so that a stranger is obliged to ask others the name of the street he is in, and frequently the question is asked of several who are as ignorant of it as himself, and thus an hour is wasted in hunting for a street, which perhaps he has been walking through two or three times during the last half-hour. The best way is to enquire at a shop; but every body does not like to enter a shop for an apparently trifling question, especially when it is so frequently treated with a repulsive answer, inattention, or a lying "I don't know," which has happened to myself many a time.

Another tantalizing omission in numerous streets, lanes, courts, and alleys, is the not numbering the houses, although perhaps there is not a more useful thing to the public than having the number fixed on the door-posts, or over the upper lintel of the door of each house.

Some general regulation for all towns, villages, and rows of houses, should be made the law of the land, to compel the fixing up of the names of all localities; to prevent more than one street or locality in the same town from bearing the same name; and to compel a general and uniform system of numbering houses; and the neglect of this law in cities, towns, villages, hamlets, rows of houses, courts, alleys, and all other localities, to

be punishable by fine and penalty on the landlord or owner of the property.

The best plan of numbering houses, is that of placing the odd numbers on the left side of the street, and the even numbers on the right, reckoning from the parish church as a centre. The advantages of this plan are, that any person in search of a house, of which he knows the number, can see at once on which side of the street it will be found, and he might thus be saved a useless walk up a long crowded street. It has been tried in some large towns on the Continent, and found to answer very well. But I think an improvement on this plan would be to begin the counting of the odd and even numbers from opposite ends of the street. Suppose we choose a long street, (say Holborn in London, for example,) and there are four hundred houses in the street, I would begin at one end with 2, 4, 6, 8, and so on up to No. 400, and begin the *opposite* end of the street with 1, 3, 5, 7, and so on up to No. 399. This would save people from the trouble of reckoning backwards, and would direct them sooner to the number wanted, no matter which end of the street they entered, which is a facility in a very long street.

POST-OFFICES.

Every town in the kingdom, and many villages also, have one General Post-office. Now, I can prove by dear-bought experience, that one General Post-office is not enough, and affords no security to letters nor guarantee for their safe sending and safe delivery. I have lost many letters that I had written to people in distant parts of England, and

put into the post at the village where I resided. After waiting a considerable time for answers, I wrote again to the same people, and still no answers came. I then waited several months before I wrote again; and when I did write, I at last got an answer from one, saying he never received my former letters. I had my suspicions that all was not going on right at the village post, and other people entertained the same suspicions; but on account of the respectability of the family who kept the Post-office, no one liked to interfere or make enquiry, or speak openly on the subject, for fear of injuring the family, who kept the first inn in the place.

Now, I attribute the purloining of letters entirely to the circumstance of there being no check upon the Post-office people; for if you sent a letter containing money to a distant correspondent, and he never received it, you naturally write again, but here is the "tug of war,"—you have to put your letter into the same Post-office; it falls into the hands of the same person who stole your first letter, and he seeing who your second letter is addressed to, has no other means of preventing detection but that of destroying it, and perhaps a third, if you are foolish enough to write again. I have many a time walked five miles to put a letter into a distant Post-office, in order to ensure its delivery.

There is only one remedy for the safety of letters, and that is, to appoint two General Post offices in every town and in every village in the kingdom, each of which shall have a separate post bag, locked with a key, a separate postman,

and a separate mail-gig, if a gig be requisite. The two General Post-offices to act totally independent of each other, and, in fact, the same as if they were set up in direct opposition to each other: but the hours of receipt, delivery, and sending off the mail to be exactly the same for both. And to prevent any collusion between the two General Post-offices, they should be kept by two distinct families, not in any way related or connected with each other; and in different houses. I would then defy a letter to miscarry, because the one would be a check upon the other. For instance, if you sent a letter containing bank notes or bills, by one of the General Offices, and there were doubts of the rectitude of its proceedings, you would write the same day by the other General Office, and if the money letter did not arrive at the same time with the other, (and no accident had caused the delay,) you might instantly fix the fault on the right people. But the very fear of such certainty of detection, and so instantaneous, would for ever prevent any man from stealing letters.

In London there are scores of Post-offices, and a man can advise a correspondent in another part of the metropolis of his having remitted him by such and such a Post-office; but in the country there will never be any safety for letters, nor any means of speedy detection, (if detection at all,) until a check be established by appointing two General Post-offices in every town, and in every village.

There is another custom in country places, which is certainly, to say the least, a very critical

one for the safety of money letters, namely—the fact of Post-offices being kept by landlords of inns and public-houses, shops, and other places of resort; and it is rendered ten times more dangerous by the kindness or familiarity of the people of the house permitting all sorts of people (their neighbours, reputed respectable,) to go and sit within the very bar where the letter bags are made up, and also received, emptied, and the letters sorted before their faces, (which I have witnessed a thousand times,) and if the good man, or his wife, or son, or daughter, be the only person sorting the letters in the presence of a neighbour, and happens to be called away to serve liquor to a customer in the tap-room or parlour, it is the easiest thing in the world for the person left in the bar to steal a letter, and not be suspected, nor ever be found out. And I have known and seen persons frequently go and sit in the bar near the table, and watch the sorting of the letters, who did not bear an over scrupulous character in affairs of integrity. As I do not wish to injure anybody unmeritedly, I shall not state any further particulars.

I think that a law should be made forbidding the Post-offices of villages and other places, from being kept at inns, public-houses, and other houses of public resort; also that no person be permitted to be in the same room with the postmaster or mistress while sorting letters, except their proper assistants; any infringement of this regulation, to be punished by a fine of five pounds, both on the postmaster who permits it, and the person intruding; half the fine to go to the informer, and

the other half to the nearest infirmary or public hospital.

COUNTRY-HOUSES.

Outside, and beyond towns and villages, country houses should never be built in rows, but only single, or by twos, say by couples, side by side, with an open space between each couple, which would allow of ample room for garden ground to each house. People who seek retirement in the country from the toils of business and worry of society, do not like to be overlooked, and their privacy encroached upon from other people's upper windows, which is a nuisance that cannot be avoided, where houses are built in a continuous row.

PUBLIC SWIMMING-BATHS.

Every town and populous village in England ought to have a public swimming-bath, situated a short distance in the retired outskirts of the place, for the resort of the labouring classes who cannot afford to pay for private baths, and for others who are recommended the exercise of swimming. The bill introduced into Parliament a few years ago, "authorizing towns to form public parks and bathing tanks," did not go far enough; it ought to have made these places of health and recreation compulsory. Heavy complaints are constantly made every summer at Liverpool and other towns, of the indecent exposure of swarms of poor men and lads who line the rivers and canals for a considerable distance, enjoying their very necessary and healthy ablutions during the hot weather.

Public bathing-tanks should not be situated at

a great distance from any side of a town, and large populous towns should have several; they should all be of a uniform shape and dimensions; and it strikes me that the canal form, or oblong piece of water is the most convenient, and the safest, as it enables a person to reach the middle in a few seconds, to succour any person seized with the cramp or drowning, easier than could be done in a large square pond; nevertheless, the breadth should not be less than one hundred feet. A length of 300 or 400 yards would be necessary to afford the different groups of bathers latitude to spread themselves out. The whole bottom of a tank should be paved with white bricks, or white stone, not glazed, but as rough as possible, and made expressly for the purpose; as when the bottom is smooth and slippery, it is difficult to stand on one's feet, and a youth not accustomed to the water might slip down and be suffocated in the water before he could recover himself again. There should be three different depths, or if the tank be 300 yards long, then 100 yards might be three feet deep for boys; 100 yards four feet deep for lads; and 100 yards five feet deep for men; besides a diving place ten or twelve feet deep, into which a wooden jetty should be run out into the water, and the place railed off. A number of alcoves about ten feet square, roofed and benched, should be erected at intervals round the tank close to the margin, for the bathers to undress in; and the whole place should be surrounded by an embankment of earth, sloped off on both sides and turfed, on the top of which there should be a promenade and seats for such of the public as like

to see swimming races, and other aquatic feats. There should be a lodge for the tank-warden, or porter, who should be charged with the care of the water, the alcoves, seats, &c.; and he should keep printed regulations for the good behaviour of all who resorted thereto. No money or fees should be permitted or required. Various apparatus should also always be in readiness in case of an accident from drowning, which, however, with all the foregoing precautions, is a contingency that would scarcely ever happen, especially if the young people were strictly kept to those parts of the water where the depth suited their own height.

The use of the embankment of earth is mainly suggested to make the tank secluded and retired from the eyes of females on the outside. There are few towns that could not afford to have one or more such tanks; and as the population of the kingdom increases, the *health* and morals of the community will soon render such provision of water an absolute and imperative necessity. The bathers should be compelled to wear a girdle called a *lungooty*, as in India, that is, a small linen apron three or four inches broad, passing between the legs, and fastened tight both behind and before to a string round the waist, for the sake of propriety.

Almost every town, village, and pagoda in India, can boast of the possession of one or more fine tanks of good water, in which the inhabitants are accustomed to enjoy their daily luxurious bathe, wash their garments, make their religious ablutions, and prayers according to their superstitious religion. These tanks vary in size, from forty to two hundred yards square, and I do not

recollect ever seeing any of a less size than forty. They are regular excavations, with a level bottom, generally about twelve feet deep: the earth is thrown up all round at some distance from the edge of the tank, as otherwise it might fall in and fill up, and also gently sloped off to the surrounding surface of the plain: the interior sides slope gently down to the bottom, and are finished with handsome hewn-stone steps, the whole length of the four sides, from the top of the edge to the bottom of the tank. The slight eminence formed by the earth round the tank, is of infinite use to travellers, it being generally dry in the wet season. A choultry or caravanserai, and a circular clump of tall shady trees commonly stand close to each tank; a pleasant halting-place for travellers.

WARMING AND VENTILATING HOUSES.*

Four things are required by human beings of sound constitution, to enable them to live and enjoy good health to the full period of human existence; namely, fit air, *warmth*, wholesome and sufficient food, and exercise of body and mind.

A human being destroys or deteriorates a gallon of air per minute, and unless ventilation, in proportion to the number of persons present in a room or building, be provided for, the bad air will in due time seriously affect the health of those living in it.

People who spend much of their time in close apartments, of which the ventilation is either left to chance, or even studiously prevented, in order to preserve the warm air therein, are not aware of

* Partly abridged from Dr. Arnott's Report.

the fatal influence on their health which the breathing a polluted and noxious air has. In many crowded schools, hospitals, &c., ventilation has been sought by openings made through the wall, near the ceiling, as directly into the open air as when panes of glass are broken, with sliding shutters to close them when desired. Now this means is far from ensuring the object. In winter, when the fires are burning, these openings, instead of being channels of escape for impure air, become entrances for cold air, which pours down upon those sitting near them; and reaching the floor, chills the feet of the others as it sweeps along to supply the draught of the chimneys. Persons sitting under or near these openings, being likely to catch severe colds or inflammations, generally close them (when they can), to obtain security. It is in winter chiefly, that the mischiefs now spoken of from imperfect ventilation are likely to arise; for, in warmer weather windows may be freely opened, although with some hazard to those sitting near them; and it is very dangerous to have top sashes down, as the downward draught of air frequently gives people rheumatism in the head.

In India, an horizontal fan, called a punkah, hanging from the ceiling, is commonly used in large rooms to swing to and fro, which fans and cools the air; but I used to think the very cold air created over our heads by a punkah, was a very unpleasant thing. The punkah vibrates the air only, but would not purify a bad air in a closed apartment in a cold climate. The ventilation of our rooms in dwelling-houses by the draught of the

chimney is very faulty, for it takes away rather the pure air which is under the level of the chimney-piece, than the impure breath which has ascended from our lungs to the ceiling, and which must again come down before it goes out; but no immediate inconvenience is felt from this except on occasions of crowded parties. For the ventilation of factories, a wheel, on the principle of the fanner, used in barns, is placed at an opening communicating with the space to be ventilated, and being turned with any desired rapidity, extracts air to the required extent. A smaller wheel of the same kind for private rooms might be worked by a weight, attached to an endless chain, passing through several pullies, or it might be worked in the same manner as a kitchen roasting-jack. Other contrivances may yet be invented by our clever mechanics.

In regard to warmth: in England, in the winter season, persons sitting without exercise, and in their usual clothing, require a temperature of from sixty-five to seventy degrees, to be comfortably warm; and their feeling of comfort is a scale whereby to judge or measure their security from the diseases produced by cold. Now, by an open fire, it is almost impossible to give such temperature to the whole of a large room, and this is illustrated by the fact of persons generally placing themselves in a circle round the fire, beyond which circle they would be too cold, but within which they would be too hot; and when in a large room with an open fire, there is a numerous company tolerably warm, they are generally maintaining the temperature in a great part by their own warm

breath, which at the same time is destroying the clear air of the room. Complaints of cold in the feet, and diseases, often begin and continue from their being chilled while under the influence of a stratum of cold air, commonly called draughts, from the bottom of the door moving along the floor towards the open fire. The heat afforded by a close iron-stove, such as is used in Germany, or by an iron fire-cupboard built into the wall, and fed with fuel from the back in another room or passage, as is the custom at St. Petersburg, in Russia, or a large iron urn standing in the middle of a room, as is frequently the case in Belgium, or a poële at one side of a room, as at Paris, is more uniform than that of an open fire, and is not attended by the draughts, &c., accompanying the latter. But Dr. Arnott says they are objectionable from the offensive and pernicious state of the air, produced by contact with the over-heated iron. I would not dispute Dr. Arnott's extensive research and superior knowledge on this subject; but I may just say that during my year's residence near Berg, in France, I used to sit all day in a room when the urn (which was four feet high,) was red-hot, nearly every day; and I cannot remember any inconvenience from it, either to myself or my twenty-nine fellow-pupils. In England, where large rooms have been well warmed, the means have been pipes of hot water or steam, conducted through the apartment to warm the whole equally, while the fresh air for ventilation is heated: as it enters, by coming in contact with these pipes. To this latter mode of warming buildings, however innoxious and simple it may appear, I enter my

humble protest: I have been informed by a respectable person, that some large building, after being warmed a short time by steam, was discovered to be decaying in every part, from damp, especially the floors and joists, which had never been known to be damp before; and he was in painful anxiety lest his parish church should be warmed with steam, which it was proposed to do at the time by the church authorities. I am not quite so certain that steam generated from some particular water, is so innocent and innoxious as some persons suppose; but even, if all steam be perfectly innocent and wholesome, yet it is a most dangerous agent to employ in warming buildings, when it insidiously saps the timber and woodwork, rotting the floors, and rendering every part not visible to the eye, damp, unsafe, and dangerous to human life. A damp building, although warm, cannot be fit for the constant residence or meeting-place of human beings: and, suppose for a moment, that the gallery in a church, or the floor of a large factory, were to give way with two hundred people in it, besides heavy benches or machinery, what destruction of life and limb would be the consequence!

The best way of warming a large apartment is by a square close iron stove or cupboard, placed in the middle of the room, which consumes its own smoke; and any pernicious air it might generate would ascend to the ceiling, and might be let off by an opening-pane of glass in one or more of the top sashes of the windows; but these opening-panes should only be opened during those intervals when the apartment is vacated for a short

time, and there are always such short intervals in most buildings and factories, when the people are absent, either for meals or some short relaxation from labour,

It is the custom to have double windows during winter at St. Petersburg, that is, two sets of sashes one within the other, with a space of six or more inches between; and all the crevices of the inner windows are pasted over with paper, so as to exclude every particle of outward air from penetrating into the apartment: this is very well for that intensely cold climate, but whether the custom be worth adopting in England, time and opinion will shew. I think it would be useful for hospitals and infirmaries during a severe winter; and where there are back and front windows in the same room in a dwelling-house, those windows the most exposed to the severest winds might have double sashes, and it would render the house as warm as if the windows were built up with a wall.

ON THE CONSTRUCTION OF CHIMNEYS.*

"Sir,—My subject, though a dingy one, has for its object the removal of a nuisance, said to be the greatest but one, (the writer will not name it, but I suppose he alludes to a scolding wife,) that can befal a man. I hope, therefore, to be pardoned for asking for a corner of your journal to make known a method by which the caps, curtains, and complexions of our fair ladies may escape the injury which the ill construction of chimneys in common modern-built houses, have inflicted upon them, by covering them with smoke once or twice

* Leeds Intelligencer.

a-day, and sometimes, *if the wind happens to blow from the wrong quarter*, all day long.

"The construction of chimneys, now-a-days, is so improper, and many architects and builders are so ignorant of the right form of them, that my astonishment is that the houses are at all to be endured.

"The model of the inside of a correctly-built chimney is the inside of a gun barrel with the breach cut off.

"I know it may be inconvenient and expensive to build chimneys round, I will therefore allow them to be square. As the inside cannot be quite smooth, let it be as smooth the whole way up as the plastered walls of a room: it cannot in all cases be straight. I will therefore, if required, for the convenience of an upper room fire-place, allow of a gentle curve: but I will not permit the dimensions or the area of the inside of the chimney to be at all varied from the bottom to the top, unless it gradually gets larger as it rises. A large majority of the builders with whom I converse say, "the more crooked the chimney, and the narrower at the top, the better the draft." Draft, forsooth! Let them make a fire on a calm day in an open field, and they will see the smoke ascend perpendicularly without any draft. This is a natural and a necessary consequence. Smoke, being much lighter than the atmospheric air, requires no draft to make it rise. Again, make a fire under the branches of a tree, the smoke will rise to the branches, against which it strikes and rebounds, and, being cooled, will fall to the ground or float horizontally, as it does from a modern-

built chimney. I had lately occasion to survey a chimney in a new-built house, which I will describe as nearly as I can.—Its open space from the lower fire-place, nine feet high, perpendicular, was three feet four inches by one foot three inches, here a stone slab was placed nearly horizontally immediately over the lower stove, covering the whole opening, except an aperture on one side, of one foot two inches by one foot three inches. The chimney was built with stone, left rough and without plastering; above this aperture, I understood, it took a crooked course until it came to the apex of the roof, where again it assumed a perpendicular direction, but at this angle or bend the space was so small and rough that a very small boy could scarcely penetrate it. Along this tortuous course the smoke was expected to ascend —but no! nothing short of a current of air sufficient to turn the sails of a windmill could make it: I caused the throat of the chimney to be reduced to the size of the smallest aperture above, which did some good.

"It must be admitted that my plan will increase the expense of house-building a little, yet no lady or gentleman will object to pay a trifle more rent to be free from this abominable nuisance.

"Permit me, sir, to say, so long as the inconvenience of smoky chimneys is attributed to some eddy from a neighbouring house, or hill, or tree, or some mysterious cause, it will exist; but when the blame is put upon the architect, to whom it properly and truly belongs, *it will cease entirely.*

"The proper construction of the fire-place must of course be attended to. I have lately seen the

ornamental work of the top front of the register stove open; nothing can be more unscientific than this; it would seem as if a premium were offered for bringing the smoke into the room; ironmongers, perhaps, know no better, but woe be to the architect who can permit such stoves to be used!

"*Let the fire-place be immediately beneath the chimney*, the opening in front as narrow as is convenient; if wider than the chimney, it must be sloped off to that width, at least, a little above the top front of the stove, which should be about one and a half times the depth of the grate above the upper bar. I am sure that if these rules be attended to, not one room in a thousand will be troubled with smoke." "J. B."

N.B.—Great care should always be taken in building the chimneys of a house, to pour in plenty of mortar between the brickwork of every layer of bricks, for otherwise, even the smallest crack not well filled with mortar, admits the wind, and if it should be but half way up the chimney, it would infallibly intercept and drive the smoke downwards into the rooms.

I believe more smoky rooms happen from the neglect of applying sufficient mortar into every layer of bricks than architects and builders are aware of. If they do not attend in person and watch narrowly the progress of building a chimney, or if they turn their backs but for a moment, the workmen will hurry over the work and frequently leave many intervals in a wall without any mortar. I have noticed the fact many a time.

FACTORY CHIMNEYS.

A discovery has been recently (1842) made in chimney-building which is likely to put a stop to the building of lofty pillars for the purpose of carrying away engine-smoke from manufactories. The reason assigned for building lofty chimneys is that the increased height gives an amazingly increased draft; (as well as that it carries the smoke high out of the way of our chamber windows.) But it has been found that a chimney of the ordinary height, or at most sixty or seventy feet, which is so constructed as to have the inside of the flue narrowest at the bottom, and gradually widening as it ascends, has the effect of increasing the draught and burning the smoke in a much greater degree than is produced by a tall flue on the old principle. A chimney built on the new principle has the appearance outwardly, of a tower, as it stands upon a large base, and carries its width on the outside to the very top. The cost is not one-third of that of one of the tallest chimneys, and the danger from falling is comparatively small. Messrs. Clark of Glasgow, have proved the superiority of the new system, having built a chimney on that principle, about seventy feet high.

Notwithstanding the invention of smoke-burners, yet it will always be necessary to build lofty chimneys to the mills and factories, as some little smoke will escape at times, which it would be well to guard against.

CONSUMPTION OF SMOKE.

Heavy complaints are made in all the manu-

facturing towns and villages in the kingdom of the dense clouds of smoke and showers of soot emitted from steam-engine chimneys, to the injury of adjoining property, and to the inconvenience and discomfort of the neighbouring families, if not to the prejudice of their health. This is an evil which has much increased of late years, and which, if not removed, will ultimately have the effect of driving many of the inhabitants who live in the most valuable houses in the towns, and are not obliged to remain there, into the country, to find air that can be freely breathed.

There are now no less than ten different Patent Smoke-consumers invented, which not only burn the smoke without injury to the boilers or expense to individuals, but actually effect a material saving of fuel: it is, therefore, to be hoped that the manufacturers will feel it to be their duty, as it is their interest, to burn their own smoke, now that they have the power. Whoever neglects to do this, ought to be prosecuted as a public pest, intent only upon his own selfish views, and regardless of the health and comfort of his neighbours.

Several societies are formed, both in London and in some of the country-towns, who are determined to prosecute all parties who neglect to consume their own smoke, including that of steam-vessels; and to compel offenders, wherever they may be found, by indictment, information, fine, or imprisonment, to abate the nuisance.

The following is a list of the patentees or inventors:—Mr. Samuel Hall, 18, King's Arms-yard, Moorgate-street, London; Mr. Bell, 11, Queen-street, Edinburgh; Mr. Richard Rodda,

35, London-wall, London, or St. Austell, Cornwall; Mr. Thomas Hall, Basinghall-street, Leeds; Mr. C. W. Williams, Liverpool; Mr. Edward Godson, 72, Aldersgate-street, London; Mr. Baron Von Rathin, George-street, Hull; Mr. Thos. Hedley, Shield Field, Newcastle-on-Tyne; Mr. Prichard, Burley-Mills, near Leeds; and Mr. Edward Billingsley, Bradford, Yorkshire. A Mr. Juckes has also recently taken out a patent for a smoke-consuming furnace.

LONDON SMOKE.

It is impossible to witness the fine buildings of this great metropolis without deploring the spoliation committed on their appearance by the eternal and apparently incurable evil of smoke. Science has put forth her arm to arrest the spread of smoke from manufacturing fires,—shall it be said that Science shall be conquered by the smoke of domestic fires?—Heaven forbid! I should think some plan might be invented for general adoption in every private house,—some kind of machinery that might be fitted to every stove-grate or other vehicle containing fire, which would operate some process that would either alter the nature of the coals, or consume the smoke, and yet permit of the cheering sight of a prattling fire, composed of those two lively companions,—flame and red-hot coals.

When it is considered how much handsomer than London Paris is, where they burn nothing but wood, and consequently the chimneys, which are universally very small, only emit a little white smoke, scarcely perceptible, and how much more

wholesome, cleanly, and beautiful, London would be, if the smoke could be conquered,—I think it is not asking too much, to say that Government should offer a reward of 5000*l.* for the discovery of any practicable scheme, not too expensive, for the prevention or consumption of the smoke of private houses.

The man that accomplishes this, would deserve to have his statue placed in the Walhalla.

If the smoke of London could be abated or prevented, the streets would look well if they were all plastered or stuccoed and yellow-washed; not a bright yellow, but a kind of sun-colour, as it is termed in painting. The metropolis would then look as cheerful and lively as Paris. The new streets that are plastered, are done with a leaden or stone colour, which has no appearance of cheerfulness in it.

CONCLUDING OBSERVATIONS.

(*Extract from a Newspaper.*)

"The Buildings Regulation Bill was the subject of a highly-respectable meeting, held at the Town Hall (Birmingham), on Tuesday last. The attention of the public is earnestly called to the provisions of this Bill. No class will be free from the effects of the measure: in most cases they will be very serious; in all very vexatious. The Bill, doubtless, was designed by very benevolent individuals; but it is based on great ignorance of the actual state of large towns. We need only refer to one of the many injurious effects, and which appears to us to be the most serious. It contains many provisions as to the mode of building, the strength of walls, and the spaces between different buildings, which will have the effect of preventing the erection of small houses, such as now constitute our numerous courts. This will be a most lamentable consequence, as, to the circumstances of the working classes residing in *separate dwellings*, is to be attributed the superior condition of our town in a sanatory point of view."

Behold a newspaper, sounding the trumpet "to arms," and immediately all the newspapers in the kingdom set themselves in battle-array against an excellent measure, that they know nothing about and misrepresent, and by their mischievous paragraphs set all the world in opposition to the most useful Bill that was ever concocted for the benefit of the nation.

"No class will be free from the effects of the measure!" What a pity!—"In most cases they will be very serious!" Why was it not made to please everybody? No good law ought to be serious.—"In all very vexatious!" It is a sad job that any laws should vex people. Why not let them continue to build pigstyes as usual, if they prefer living in such holes?—"The Bill was based on great ignorance of the state of large towns!" I rather think the *great ignorance* is with the writer of the paragraph; for it is a great deal more probable that the individuals who designed the Bill, and who have been studying the subject for years, (I have myself heard of this Bill every year for several years,) and visiting and enquiring, and making their reports of the state of the great towns, should know the posture of affairs, the faults and the best modes of providing against them in future, a little better than a small landlord, which I take the writer to be, engrossed in his own little circle of interests. His most serious objection against the Bill is, that it will prevent the erection of small houses in the numerous courts and alleys, which, he says, will be a most lamentable consequence. After what I have written against courts and alleys, it is scarcely worth

while to say, that I regard this portion of the Bill as the very best part of it. But then he says, "it is to the circumstance of the working classes residing in *separate dwellings*, that their superior health and cleanliness is to be attributed." Separate dwellings!—Why, what stupidity! Cannot poor people live in separate houses in wide streets as well as in courts and alleys?

As to the assertion that the cleanliness and healthiness of a town is to be attributed to the fact of the poorer classes living in separate houses, —it may partly be so in Birmingham, but it is a consequence that does not always follow; witness the filthy separate houses of some other manufacturing towns, Leeds, for instance: here may be seen a thousand families living in separate houses, and the most part of them up to their ears in filth. Courts and alleys are more liable to disease from impurity of air, and the crowding of poor people together, than open wide streets.* Birmingham is certainly a clean town, considering what manufactures are carried on there; but I will tell the reader what the superior sanatory state of that town is owing to: it is not to the labouring people living in separate houses, but it is owing to the

* It was mentioned at a meeting of the Town Council of Leeds, that one of the little courts (the Boot and Shoe Yard) was the source of very much fever, there being removed from it in 1840 no fewer than forty-three cases to the House of Recovery. The cases of fever from the same court were not so many last year, in consequence of some improvement in the drainage; but, owing to the only entrance to the yard being in Kirkgate-street, there was no calculating what cases of fever might result from that yard, by persons passing by, and coming in contact with the contagion, or even infection, arising from the disease.

circumstance of Birmingham being seated on a steep hill, and every heavy shower of rain washes it as clean as if Hercules himself had been employed on the mighty task. (Colchester, also seated upon a hill, is a remarkably clean town, for the same reason.) And as to the interior of the poorer people's separate houses, it must be borne in mind that they have been looked after by the authorities with a little more care, and for a long period; whereas much neglect has been shewn until lately to the same classes in other manufacturing towns.

But I shall bring proofs that living in separate houses has nothing to do with cleanliness. My proofs shall be drawn from no less a city than the capital of France. It is notorious that the French are not over cleanly in their habits; and yet in that city there are thousands of houses seven and eight stories high, with a different family on each floor. I resided in a house of this height, full of families from top to bottom. Each floor consists of a complete house, say, one or two sitting-rooms, dining-room, bed-rooms and closets, with a *cabinet d'aisance*. The bed-rooms are paved with tiles, as are most of the upper staircases, so that fire is impossible. The rooms are lively and delightful owing to their having so many handsome windows. Unfortunately, water is not laid on by pipes, so that people have to fetch from the fountains; but then there is a small cistern fixed outside one window on each floor, with a large pipe to the ground outside, into which all the slop and wash-water is poured, which saves servants and poor people from a great deal of running up and down

stairs. The house I was in (notwithstanding the number of its inmates) was as clean as a new pin. I think it was washed every day. I also visited at a house where the family lived in the roof, they being in rather humble circumstances. I had to ascend about seven flights of stairs, and curiosity induced me to count the steps; they amounted to one hundred and twelve, and pretty deep ones too; and I can assure the reader it was capital exercise for an asthmatic to mount them; and yet the family had a nice clean healthy nest at the top of the house, and were the picture of health themselves.

I never wish to see the English people live in houses with more than four or five stories; yet if they did, I am persuaded it would make all our cities and towns incomparably more compact, and very much more beautiful. I, however, succumb to the old custom of separate dwellings; but I deny that it is the cause of more health or more cleanliness.

If the newspapers do some good, they do a great deal more harm. It is by such paragraphs as the foregoing, that people have been set against many an excellent law, and got it frittered away, till the thing was not worth enacting; never canvassing a measure on a broad basis and an expanded scale as if for a whole people, but distorting it to suit some one class, or petty private interest.

I take it that the writer is just the sort of person who would do any thing to prevent the improvement of a town or a neighbourhood, if it, in the most distant way, clashed with his own ideas or

his own interests, though it were only for a short time. If the proposed alteration is intended to make other people more comfortable, or to benefit a town in a general way, it is sufficient; it immediately becomes the object of his hatred.

Some people take an uncommon delight in thwarting the advancement, improvement, or happiness of their fellow-creatures. I remember a most lovely romantic walk, the favourite resort of young people: an envious spiteful man had watched it for some time, and at length built a house near the middle of it, on purpose to break up its retirement and pleasantness for ever, and he effected his malicious purpose. I was acquainted with a clergyman, whose house commanded a delightful view up a hill: some disagreeable people, he told me, had erected three houses exactly in front of his, on purpose to spoil the prospect, which he bitterly complained of till the day of his death: but as the builders became bankrupts immediately after, they did not go unpunished. I knew a gentleman, whose country house, seated upon a hill, commanded a view all round, till some spiteful people built a meeting-house in such a way as to ruin the pleasantness of the situation, and he said it was done on purpose. I once read in the papers of a spiteful man placing a haystack in front of a gentleman's house, in order to spoil the view from it, and when the hay was all gone, built a cottage on the same spot for the same purpose.

It is truly almost a helpless task to enact laws for the improvement of towns and buildings, or to preserve beautiful places from malicious encroachment, while such a bad spirit exists in mankind,

and the newspapers encourage and blow the flame of opposition.

In connection with the subject of building, I take the liberty of recommending to Government the adoption of the few following measures.—To reduce or abolish the taxes or duties on bricks, tiles, and window-glass, and to institute penalties on the fabrication of bad articles of the same classes.

To greatly modify the window-tax in private houses, by allowing each house and cottage to have ten windows without tax, instead of only seven; and to abolish the system of compromise for the window-tax, which was a most unfair thing to the rest of the community when it was enacted to save the pockets of the wealthy classes. To institute taxes or penalties on all persons building streets of a less width than a minimum fixed by law: on ill-built houses; on small or ill-proportioned rooms (the minimum to be fixed); on rooms and stairs not well lighted; on staircases built without bannisters on both sides, or having steps more than five and a half inches high;* on ill-planned stoves and grates; on houses in towns having no yards and privies; on houses out of towns having no gardens and privies; on streets, lanes, courts, and alleys, being private property, not well drained; on builders and other persons unnecessarily damaging any site or locality by ill-placed buildings, though on their own property, for no man has a right to injure a fellow-creature in a Christian land.

* It is extremely painful to sick, weakly, and elderly people, to mount stairs when the steps are higher than five and a half inches, which is too generally the case.

These and a few other regulations of like nature, formed into an Act of Parliament, not retrospective in effect, would work such delightful improvements in the course of time, that everybody in the kingdom would share in the comforts arising therefrom.

The subject of enclosing and cultivating the *good* waste land all over the kingdom, is at last going to be taken up in earnest by the House of Commons; and this brings us to the consideration of the millions of acres of *bad* waste land. To cultivate the good land is no very difficult matter. Place small colonies upon it, and the thing will be done in a trice. But how to make the barren land bear human beings is the grand question.

It may startle some political economists to talk of commencing the building of *new cities* in England,—I say new cities, planned as cities from their first foundation, and not mere small towns or villages, or emigrant settlements. A time will arrive when something of this sort must be done in England, all the good waste land having been enclosed, and nothing remaining but the bad waste land: the frightful increase of the population, will eventually force the nation to form some plan to make it support its share of human beings. It may startle political economists, but let the subject be viewed in any light, let it be considered with the coolest brain, or argued against in the most rational manner, England cannot escape from the alternative of new city building.

Old cities, towns, villages and hamlets, will go on increasing in size and doubling and trebling their present numerous population, but this will not change the nature of the large expanse of

barren lands, and yet it must be made fruitful. Towns must be built upon them first, to effect that change.

I recommend Government to begin the building of ten new cities in England, each intended to contain three hundred thousand souls, and to be colonized from the old cities; the Legislature to grant two millions stirling a-year, for twenty years, for the building department. The plans of the cities to be drawn on paper, with every improvement that science is capable of suggesting, and engraved, and afterwards marked out on the ground to the extent and space calculated for the above mentioned amount of population; every street in a new city to have only four houses in it at the first set off, namely, one house on each side the street at the top and bottom, just to show the two lines of foot pavement, and the width of the street. Each city to be planted in the centre of the most barren, hungry, impracticable, useless, waste land. Of these there are many vast tracts, amounting to nearly twenty-four millions of acres, which can never be made into good land for want of a sufficiency of manure, and an amount of manual labour, utterly impossible to be yielded by mere isolated emigrant settlements or detached solitary colonists.) The cities to be partially peopled before the land be touched.

One city might be built on the Rishworth Moors, adjoining the high-road, about half way between the town of Oldham and the village of Rishworth, where the high land of Blackstone Edge extends for some miles in length, and presents an extent of thirty or forty thousand acres of undulating

useless land, of a peaty and sandy character, in a climate somewhat bleak for scattered settlers, and rather scanty of water; but the former would become ameliorated in the vicinity of a city, and by the planting of trees; and water might be procured by sinking wells, forming ponds, waterworks, and aqueducts. The whole country furnishes stone for building, and I am told there are twelve thousand acres of moors within the boundaries of Rishworth alone.

Perhaps it may be asked how the people of these suddenly created cities are to get their living?—to which I reply, by the same or by similar means as in large cities on the Continent, which have neither trade nor manufactures, except what is supported by and within themselves.

The houses, streets, pavements, and sewerage of the new cities, to be built and constructed by Government; and the inhabitants to live rent free the first two years, to encourage their settling. No return to be expected from the land for several years; but a progressive rent (never very high,) to be paid for the houses.

A great deal of the money laid out on this national work must be regarded as sunk; but then let it be considered what an incalculable amount of good ten new cities, on land that was once deemed uncultivable, would produce by absorbing three millions of the surplus population. It would be a double blessing to the country.

And whilst Government is building new cities, that shall embrace all the science and improvements in building and planning, from their first foundation, let the wealthy classes become build-

ers, and improve their favourite towns and villages. I can conceive no greater pleasure than that of improving, embellishing, and beautifying the town or village, where it is a man's destiny to spend the greater part of his life.

Some men seem to place all their happiness in being thought greater or richer than their neighbours, and watch over the accumulation of their wealth with unceasing solicitude, regardless of every thing else; but when they are about to quit the world, they find that their wealth does not afford them one atom of consolation, and more than that, their memories are despised by their fellow-creatures. "Well," says Mr. A. to Mr. B., "Mr. Plutus is gone at last!" "Yes, and a good riddance too," replies Mr. B.; "he neither did himself any good with his wealth, nor any body else; his property will now come into the hands of a more liberal-minded man!"

Other men, with patriot hearts, expanded minds, and generous dispositions, use their power and influence in benefiting their common country; and if their sphere be not in affairs of state, they engage in the more private, homely, and more delightful pleasures of heaping benefits on the city, town, or village where they have to pass most of their days. They plan and lay out parks, groves of trees, promenades or walks, dig pieces of water, and improve rivers; they also patronize and share the cost of improving streets, public buildings, roads, and bridges. When a rumour is heard that they are confined to a sick bed, every mind evinces its anxiety for their recovery; but the hour is come for their departure from a well-

spent life, and their departure is mourned with a great mourning: every heart feels that a public benefactor is gone. Their memories are revered and handed down to posterity, as the renovators of their town, the builders of the bridges, the architects of the streets, the embellishers of the public walks, the founders of the public buildings, and the endowers of the civic foundations of charity, science, and amusement. What they did was a pleasure to them; but others reaped the benefit afterwards. I have built several houses in my time, and I can say that I never enjoyed greater pleasure, either before or since, than while I was engaged in the healthy and delightful occupation of building.

What a satisfaction must the mind of a man feel on his death-bed, in the reflection that he has been useful to his fellow-creatures, and that the eye of God saw the purity of his motives. A man of disterested and exalted mind dies! but his immortal spirit lives with God in heaven, and his memory in the hearts of his countrymen on earth, for ever.

Spiritually speaking, God knows the secret motives of every man's actions, and if they spring not from love for his brethren, they are worth nothing in his sight. Patriots both love their country and their fellow-creatures, and would give every man a palace if they could.

To conclude. I have not suggested one alteration or one improvement, in any town, or in any street, or in any building, that could not be effected within the next thirty or forty years, without injury to any living soul; but on the contrary, to the ultimate benefit of both public and private in-

terests, estates, and fortunes. But professional men and tradespeople, are so wedded to their old rules and customs, especially architects and builders, that I do not expect any of these classes will adopt my recommendations; nevertheless I have not allowed this consideration to deter me from giving this little book publicity, for "Time worketh miracles," and every innovation on old customs requires a long period for its examination, trial, and sentence. The utility, or comfort, or beauty of any thing new, meets with a variety of opinions and cavils:—while one thing will appear self-evident at first sight; a second, though not actually resisted, yet is accepted so reluctantly that it requires some period to elapse before it fully strikes the understanding; a third will be resisted with pertinacity a good while, but at last is received; and a fourth is resisted permanently, and no impression of its usefulness can be made upon mankind, who reject it altogether, although it might make earth a very paradise if adopted. There has always been some strong private interest that could not be overcome—and there always will be.

Such is the reception which I may predict for my "Suggestions," which I now leave to their fate.

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